EXHIBIT A

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In The Matter of	)	
	)	GN Docket No. 13-5
Technology Transitions	)	
	)	GN Docket No. 12-353
AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition	)	

REPLY COMMENTS OF CHARTER COMMUNICATIONS, INC.

Catherine Bohigian
Executive Vice President, Government Affairs
Alex Hoehn-Saric
Senior Vice President, Government Affairs
Charter Communications, Inc.
1099 New York Ave., NW
Suite 650
Washington, D.C. 20001
(202) 639-6000

Samuel L. Feder
Luke C. Platzer
JENNER & BLOCK LLP
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-6000

Michael R. Moore
Vice President & Associate General Counsel, Regulatory Affairs
Charter Communications, Inc.
12405 Powerscourt Dr.
St. Louis, MO 63131
(314) 543-2414

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In The Matter of	)	
	)	GN Docket No. 13-5
Technology Transitions	)	
	)	GN Docket No. 12-353
AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition	)	

REPLY COMMENTS OF CHARTER COMMUNICATIONS, INC.

Charter Communications, Inc. ("Charter") hereby submits the following reply comments to the Commission's February 28, 2014 Public Notice seeking comment on AT&T's February 27, 2014, proposal to conduct experiments in two AT&T wire centers—in Carbon Hill, Alabama and Kings Point, Florida—in which TDM-based services would be transitioned to IP- and wireless-based services.[1] Charter has been providing its own IP-based voice and data services around the country for many years, including in Carbon Hill. Charter submits these reply comments not to criticize AT&T's efforts to deploy IP services in Carbon Hill and King's Point, but instead to note AT&T's failure to offer any plan or timeline to provide the service most essential to the IP transition—IP interconnection for voice services—anywhere.

As many commenters have already noted, the AT&T proposal addresses only a small portion of the IP transition—how LECs still using TDM-based technologies in portions of their networks transition their customers to IP-based services at the retail level.[2] Although many ILECs have been slow to undertake this transition, the technology and logistics of providing

[1] FCC Public Notice, GN Docket Nos. 12-353 and 13-5, *Commission Seeks Comment on AT&T's Proposal for Service-Based Technology Transitions Experiments*, DA 14-285 (Feb. 28, 2014) ("*Public Notice*").

[2] *See, e.g.*, Comments of T-Mobile USA, Inc. at 3-4 (Mar. 31, 2014) (noting "limited utility" of AT&T's trial given lack of focus on important questions such as IP interconnection).

retail voice services to customers in IP are well-known and well-understood. Facilities-based Voice over Internet Protocol (VoIP) providers, including Charter, have already been providing such services for the better part of a decade. Moreover, a number of today's facilities-based IP providers that previously offered TDM-based voice services before making the investments to upgrade their networks have demonstrated how to successfully transition to an IP-based network. Therefore, it is unlikely that the AT&T trial will shed much new light on the related technical issues.

Charter, however, agrees with commenters who have pointed out a critical area where AT&T, in these proposed experiments and elsewhere, has been conspicuously silent – the provision of IP interconnection to other carriers.[3] This is the real bottleneck to a nationwide IP transition. As Charter has emphasized to the Commission in the past, the reluctance of ILECs to offer IP interconnection to competitive carriers, or to offer it on reasonable terms, is significantly inhibiting the IP transition.[4] The lack of IP interconnection means companies that have invested in IP, like Charter, must maintain numerous inefficient TDM-based interconnection points with ILECs, raising costs and limiting the ability to offer advanced IP-based features.

As ILECs increasingly move their own networks more fully to IP, as AT&T proposes for its Carbon Hill and Kings Point wire centers, it becomes increasingly clear that there is no good technical reason for those ILECs to withhold IP interconnection from competitive carriers eager to interconnect in IP under existing federal rules. Instead, forcing competitive carriers to incur the costs of interconnecting in TDM—even when the ILEC itself uses IP within its own

[3] *See, e.g.*, Comments of Competitive Carriers Association at 4-5 (Mar. 31, 2014) (noting that AT&T Proposal fails to describe wholesale IP services it will offer after transition); Comments of Sprint Corp. at 3-4 (Mar. 31, 2014) (noting that trial fails to address important question of IP interconnection).

[4] *See* Reply Comments of Charter Communications, Inc., GN Docket No. 13-5 (Aug. 7, 2013), at 2-3 (citing sources).

network—operates as little more than an effort by ILECs to force competitors to waste resources and limit their ability to offer advanced IP-based features.

As Charter and others have emphasized to the Commission, meaningfully advancing the IP transition will require ILECs to offer IP interconnection on reasonable and nondiscriminatory terms. The Commission can best further that goal by clarifying that the interconnection obligations of Sections 251 and 252 of the Communications Act apply equally irrespective of the technology used, and—at a bare minimum—require ILECs to offer interconnection in IP when they use IP to provide connections to *themselves*, such as for retail service (like in Carbon Hill and Kings Point).[5] The increasing transition of ILEC networks to IP at the retail level simply reemphasizes the need for the Commission to act promptly in making this clarification, so that the IP transition can move forward in a timely manner. This will reduce costs for all carriers, promote competition, and improve the quality of service to consumers.

CONCLUSION

Charter continues to urge the Commission to take the steps needed to move the marketplace towards IP interconnection—including acting to clarify that Sections 251 and 252 of the Communications Act govern IP interconnection for managed VoIP traffic.

[5] *See, e.g.* Reply Comments of Charter Communications, Inc., GN Docket No. 12-353 (Feb. 25, 2013), at 4-6; Comments of Charter Communications, Inc., WC Docket 10-90 et al., at 3-9 (Feb. 24, 2012); Comments of Cablevision Systems Corp. and Charter Communications, Inc., WC Docket No. 11-119 (Aug.15, 2011); Reply Comments of Charter Communication, Inc., WC Docket No. 10-90 et al., at 8-9 (May 23, 2011).

Respectfully Submitted,

Catherine Bohigian
Executive Vice President, Government Affairs
Alex Hoehn-Saric
Senior Vice President, Government Affairs
Charter Communications, Inc.
1099 New York Ave., NW
Suite 650 Washington, D.C. 20001
(202) 639-6000

/s/ Samuel L. Feder___
Samuel L. Feder
Luke C. Platzer
JENNER & BLOCK LLP
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-6000

Michael R. Moore
Vice President & Associate General Counsel,
Regulatory Affairs
Charter Communications, Inc.
12405 Powerscourt Dr.
St. Louis, MO 63131
(314) 543-2414

April 10, 2014

EXHIBIT B

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Technology Transitions Policy Task Force Public Notice Regarding Potential Trials	)	GN Docket No. 13-5

REPLY COMMENTS OF CHARTER COMMUNICATIONS, INC.

Catherine Bohigian
Executive Vice President, Government Affairs
Charter Communications, Inc.
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-6000

Samuel L. Feder
Luke C. Platzer
JENNER & BLOCK LLP
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-6000

Mark E. Brown
Vice President, Government Affairs
Charter Communications, Inc.
11720 Amber Park Drive, Suite 160
Alpharetta, GA 30009
(770) 754-5269

Michael R. Moore
Vice President & Associate General Counsel,
Regulatory Affairs
Charter Communications, Inc.
12405 Powerscourt Dr.
St. Louis, MO 63131
(314) 543-2414

August 7, 2013

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Technology Transitions Policy Task Force Public Notice Regarding Potential Trials	)	GN Docket No. 13-5

REPLY COMMENTS OF CHARTER COMMUNICATIONS, INC.

Charter Communications, Inc. ("Charter") hereby submits the following reply comments on the Commission's Technology Transitions Policy Task Force ("Task Force") proposal to conduct Voice over Internet Protocol ("VoIP") interconnection trials.[1] Charter agrees that the unavailability of IP interconnection is a significant problem and welcomes Commission action to address it. As Charter has previously explained, this problem could best be solved by promptly clarifying that the interconnection regime in Sections 251 and 252 of the Communications Act governs IP interconnection for managed VoIP traffic. If the Commission is not yet prepared to take this step, Charter supports the proposed IP interconnection trials to the extent they can shed light on the lack of availability of IP interconnection and encourage its adoption. Any such trials should be conducted in a prompt manner and should, to the extent possible, replicate real-world conditions.

DISCUSSION

Charter is the fourth largest cable company in the United States, serving approximately 5.8 million customers. Charter has long supported efforts to transition the nation's networks to

[1] *Technology Transitions Policy Task Force Seeks Comment on Potential Trials*, GN Docket No. 13-5, Public Notice, 28 FCC Rcd 6346 (2013) ("Notice").

IP, having invested billions to rebuild its legacy analog plant and to deploy broadband, competitive voice, and advanced video services to its largely rural subscriber base. Over 99% of the voice services Charter provides to its customers are now provided in IP, and Charter is in the process of transitioning the remaining voice customers to IP.

The ability to interconnect in IP is particularly important to Charter because of its geographic footprint and customer base. Charter's voice customers are widely distributed among 27 different states, and, in most of the areas that Charter serves, Charter's voice offering is the only facilities-based alternative to ILEC voice service. Moreover, despite Charter's having a large number of customers on a *national* basis, the Incumbent Local Exchange Carrier ("ILEC") is still the dominant voice provider in every single market Charter serves. For this reason, Charter is particularly cognizant that the policies enacted by Congress in the Communication Act of 1996 ("1996 Act") – to ensure that competitive providers can interconnect to the nation's phone network and that ILECs not be able to act anticompetitively by exploiting their market position – remain vital to continued competition today. Congress recognized that this competition is essential to discipline the rates that consumers and small businesses pay for services and to provide customers with a range of innovative offerings.

As a number of commenters have explained, there is little reason to believe that technical issues currently operate as a meaningful constraint on IP interconnection availability. Many competitive providers, interexchange carriers, and wireless providers all use IP to interconnect their networks and carry voice calls now, and have been doing so for many years.[2] Rather, the principal barrier to IP interconnection has been ILECs' reluctance to offer it on reasonable

[2] *See, e.g.*, Comments of Sprint Nextel at 5-6; Comments of Cablevision Systems Corp. ("Cablevision Comments") at 3 n.4 (non-ILEC carriers already interconnect in IP); Comments of American Cable Association at 6-7 (technical issues surrounding IP interconnection are settled).

terms.[3] Thus, as Charter has advocated in other proceedings, the Commission should address the problem by making clear that the interconnection regime in the Communications Act applies to interconnection for managed voice traffic irrespective of the communications protocol in which carriers exchange calls. Charter has previously explained the legal arguments for why the Communications Act compels this conclusion as a matter of law, and it incorporates those comments here.[4]

Nevertheless, if the Commission is not prepared to take that step at this time, Charter supports the proposed IP interconnection trials to the extent they may shed light on the lack of availability of IP interconnection and encourage its adoption. As several commenters recommend, any such trials should be conducted so that they simulate real-world conditions to the greatest extent possible and do not unduly delay the Commission's resolution of the legal framework governing IP interconnection.

First, any trials should be conducted in a manner that does not prejudice the Commission's judgment of the appropriate legal regime for interconnection.[5] Second, the Commission should ensure that trials are not used as a delaying mechanism to allow ILECs to further defer offering IP interconnection on reasonable terms in markets beyond the trial areas. Therefore, the trials should be started – and completed – promptly so that the Commission can

---

[3] *See, e.g.*, Comments of Cbeyond Communications, LLC, Earthlink, Inc., Integra Telecom, Inc., Level 3 Communications, LLC, and tw telecom inc. at 11-19 (ILEC unwillingness to negotiate IP interconnection, not technical obstacles, is primary barrier to IP interconnection today); Comments of COMPTEL at 16-17 (same); Cablevision Comments at 3.

[4] *See* Reply Comments of Charter Communications, Inc., GN Docket No. 12-353 (Feb. 25, 2013), at 4-6 (attached as Exhibit A); Comments of Charter Communications, Inc., WC Docket 10-90 et al., at 3-9 (Feb. 24, 2012) (attached as Exhibit B); Comments of Cablevision Systems Corp. and Charter Communications, Inc., WC Docket No. 11-119 (Aug.15, 2011) (attached as Exhibit C); Reply Comments of Charter Communication, Inc., WC Docket No. 10-90 et al., at 8-9 (May 23, 2011) (attached as Exhibit D).

[5] *See, e.g.*, Comments of Cox Communications, Inc. at 4-6; Cablevision Comments at 5-6.

take further action within a short period. There is no reason the trials cannot be completed within six months. Third, the Commission should ensure that ILECs do not manipulate the trials in order to support the regulatory outcome they advocate. Charter thus supports proposals to ensure that any trials mimic real-world conditions in which participating carriers are required to interconnect on a state or multi-state basis, as well as abide by any interconnection agreements reached during the trials even after the trials conclude, thus reducing incentives for manipulation.[6] Finally, Charter agrees with the multiple commenters arguing that any agreements reached via trials should be made public.[7]

[6] *See* Cablevision Comments at 4.

[7] *See, e.g.*, Comments of New Jersey Division of Rate Council at 30-31; Comments of Public Knowledge at 7-8; Cablevision Comments at 4-5.

CONCLUSION

Charter appreciates the Commission's attention to advancing IP interconnection, and urges it to do so by promptly clarifying the governing legal regime or, in the alternative, ensuring that any trials are prompt, realistic, and do not prejudice the Commission's ability to apply existing interconnection obligations to IP interconnection in the future.

Respectfully Submitted,

Catherine Bohigian
Executive Vice President, Government Affairs
Charter Communications, Inc.
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-6000

Mark E. Brown
Vice President, Government Affairs
Charter Communications, Inc.
11720 Amber Park Drive, Suite 160
Alpharetta, GA 30009
(770) 754-5269

/s/ Samuel L. Feder___
Samuel L. Feder
Luke C. Platzer
JENNER & BLOCK LLP
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-6000

Michael R. Moore
Vice President & Associate General Counsel,
Regulatory Affairs
Charter Communications, Inc.
12405 Powerscourt Dr.
St. Louis, MO 63131
(314) 543-2414

August 7, 2013

EXHIBIT C

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition	)	GN Docket No. 12-353

REPLY COMMENTS OF CHARTER COMMUNICATIONS, INC.

Mark E. Brown
Senior Director and Senior Counsel
Charter Communications, Inc.
11720 Amber Park Drive, Suite 160
Alpharetta, GA 30009
(770) 754-5269

Michael R. Moore
Senior Director and Senior Counsel
Charter Communications, Inc.
12405 Powerscourt Dr.
St. Louis, MO 63131
(314) 543-2414

Samuel L. Feder
Luke C. Platzer
JENNER & BLOCK LLP
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-6000

February 25, 2013

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition	)	GN Docket No. 12-353

REPLY COMMENTS OF CHARTER COMMUNICATIONS, INC.

Charter Communications, Inc. ("Charter") hereby submits these reply comments in the above-captioned proceeding. Charter agrees with AT&T, the National Telecommunications Cooperative Association ("NTCA"), and many of the other commenters in this proceeding that the Commission should take steps to facilitate the nationwide conversion to an all-Internet Protocol ("IP") voice network.[1] However, Charter firmly opposes any suggestion by AT&T and other Incumbent Local Exchange Carriers ("ILECs") that the Commission's efforts should include eliminating or relaxing ILECs' obligation to interconnect with competitive providers when IP technology is used. To the contrary, a critical component of advancing the IP transition will be ensuring the availability of IP interconnection – the absence of which is functioning as a barrier to the IP transition today – and Charter agrees with many of the commenters in this proceeding that the Commission should take action to ensure that such interconnection is available on reasonable terms.[2]

[1] *See* AT&T Comments at 1; NTCA Petition at ii-iii; Cablevision Comments at 2; CenturyLink Comments at 1-2.

[2] *See, e.g.*, Cablevision Comments at 3-4, 4-5; Cbeyond *et al*. Comments at 6-16; NTCA Petition at 13-14; Competitive Carriers Association Comments at 4-6; Comptel Comments at 7-11; Cox Communications Comments at 9-11.

INTRODUCTION AND SUMMARY

Charter is the fourth largest cable company in the United States, serving approximately 5.3 million customers. Charter has long supported efforts to transition the nation's networks to IP, having invested over $8 billion to rebuild its legacy analog plant and to deploy broadband, competitive voice, and advanced video services to its largely rural subscriber base. Over 99% of the voice services Charter provides to its customers are provided in IP.

The ability to interconnect in IP is particularly important to Charter because of its geographic footprint and customer base. Charter's customers are widely distributed among 25 different states, and, in most of the areas that Charter serves, Charter's voice offering is the only facilities-based alternative to ILEC voice service. Moreover, despite Charter's having a large number of customers on a *national* basis, the ILEC is still the dominant voice provider in every single market Charter serves. Therefore, Charter is particularly cognizant that the policies enacted by Congress in the Communication Act of 1996 ("1996 Act") – to ensure that competitive providers can interconnect to the nation's phone network and that ILECs not be able to exploit their market position to harm competition – remain important today.

Congress' goal of advancing competition by requiring ILECs to interconnect with competitive providers, however, is being frustrated as the nation's voice networks transition to IP. Despite the large investments that providers like Charter have made in IP technology, much of the Public Switched Telephone Network ("PSTN") continues to use circuit-switched equipment, imposing inefficiencies on IP-based providers and denying consumers the full benefits of the IP transition. ILECs in Charter's service areas do not provide IP interconnection, and as comments in this proceeding indicate, Charter's experience is hardly unique among

competitive providers.[3] By refusing to interconnect in IP on reasonable terms, ILECs are discouraging investment by providers who fear that upgrading their networks to IP technology will generate additional costs when ILECs then require them to convert their IP traffic to Time Division Multiplex ("TDM") formant in order to interconnect. Thus, an essential focus of the Commission's efforts to speed the IP transition must be improving IP interconnection, including clarifying that carriers have the same rights to interconnect and exchange voice traffic in IP as they do in TDM.

While the precise relief AT&T seeks in its petition is unclear, AT&T plainly seeks to eliminate interconnection rights, arguing that there are no IP interconnection rights under existing law – even for managed voice traffic – and that no such rights should be recognized.[4] AT&T's attack involves both a legal argument – that there is no right to interconnect in IP because Voice over Internet Protocol ("VoIP") providers are "information service" providers rather than telecommunications carriers[5] – and a policy argument – that once the phone network has transitioned to IP, it will function like the public Internet, where commercial arrangements have been able to address the interconnection of networks without the need for a regulatory backstop.[6] Both arguments are mistaken.

As for AT&T's legal claim, the 1996 Act's interconnection obligations are technologically neutral and do not depend on what communications protocol is used. And the provision of exchange access services on an intercarrier basis is a telecommunications service

---

[3] *See, e.g.*, Cbeyond Comments at 12-13; Sprint Nextel Comments at 28; Cablevision Comments at 3.

[4] *See* AT&T Comments at 11-12.

[5] *Id.*

[6] *Id.*

that subjects the participating carriers to Section 251, even if the service provided to retail customers is an information service.

As for AT&T's policy claim, Charter strongly agrees that the public Internet should remain unregulated. However, the market for transmission of voice calls is very different. Whereas Internet traffic can take numerous different paths between networks without degradation or coordination (thus minimizing both the incentives and the opportunities for individual providers to act anticompetitively), the managed IP networks used by facilities-based providers like AT&T and Charter for voice calls share all the same bottlenecks and opportunities for anticompetitive conduct as the traditional PSTN. Indeed, for all intents and purposes, it is the same network, with the same players, only using upgraded technology. Thus, while carriers might upgrade the communications protocol in which they transmit voice calls from TDM to IP, the concerns that caused Congress to include interconnection obligations in the 1996 Act remain vital today.

I. IP INTERCONNECTION FOR VOIP SERVICES IS LEGALLY REQUIRED.

As stated above, IP interconnection is critical to transitioning the nation's voice network to IP. Carriers have reduced incentive to upgrade their networks to IP if interconnection with the ILEC will require them to convert their traffic to TDM in order to interconnect. In addition, the current system – under which many ILECs refuse to interconnect in IP even with carriers that have already made the investments to upgrade their networks to IP – penalizes the very investments needed to modernize the nation's voice networks. Charter's experience, in providing competitive VoIP service across 23 different states, is that no ILECs have offered or permitted IP interconnection under the Act, taking the position (as AT&T does in its comments

here) that no legal obligation to interconnect in IP exists. The comments in this proceeding confirm that this experience is common across the industry.[7]

As a number of commenters have noted, there is no merit to the proposition that IP networks are somehow exempt from interconnection requirements. Charter has explained extensively in other comments that Section 251 imposes interconnection obligations without respect to the technology used, and that to the extent an ILEC provides IP interconnection within its own network or to affiliated entities, Section 251(c)(2) of the Act requires it also to make interconnection available to CLECs on the same terms.[8] Rather than repeat its previous submissions on the subject, Charter incorporates them by reference here.[9]

AT&T's argument to the contrary relies upon the claim that no interconnection obligations attach to VoIP service, because VoIP is an "information service" rather than a "telecommunications service" under the Communications Act, such that the entities providing it are not carriers subject to Section 251.[10] As Charter has explained, however, even if retail VoIP service is properly classified as an information service the provision of access services in connection with VoIP calls on a wholesale basis is a telecommunications service, and carriers providing such wholesale service have interconnection rights and obligations under Section 251.[11] The Commission has made clear that ILEC provision of exchange access constitutes

---

[7] *See* note 3 *supra*.

[8] *See generally* Comments of Cablevision Systems Corp. and Charter Communications, Inc., WC Docket No. 11-119 (Aug. 15, 2011) ("Cablevision/Charter Comments").

[9] *See Id*.

[10] *See* AT&T Comments at 11-12.

[11] *In re Time Warner Cable Request for Declaratory Ruling that Competitive Local Exchange Carriers May Obtain Interconnection Under Section 251 of the Communications Act of 1934, as Amended, to Provide Wholesale Telecommunications Services to VoIP Providers* 22 FCC Rcd 3513, 3515, ¶4 (2006).

provision of a telecommunications service,[12] such that they are carriers subject to Section 251 irrespective of how VoIP is classified at the retail level. Policy considerations aside, there is simply no merit to AT&T's attempt to frame itself as exempt from its interconnection obligations under existing law merely because of an change to the protocol used to convey voice calls.

II. IP INTERCONNECTION RIGHTS FOR MANAGED VOIP SERVICES REMAIN CRUCIAL, AND THE INTERNET PEERING MODEL IS INAPPOSITE.

Beyond its legal argument, AT&T also makes a policy argument that interconnection requirements in the IP context are no longer necessary. Much of AT&T's argument for abandoning interconnection obligations centers around its claim that the Internet is able to function through voluntary peering arrangements by which data is transmitted among various providers without the need for regulatory oversight.[13] This analogy is misplaced. The competitive market for transmission of data on the public Internet is not inherent in the nature of Internet Protocol, but rather arises from features of that market that are not shared by the market for voice services. Superficial analogies between the two will only engender policies that harm competition and hurt consumers.

In the context of the public Internet, the market for peering arrangements has been able to function without regulatory interconnection requirements because of the absence of incentives and opportunities for transmission providers to exert monopoly pricing. IP packets on the public Internet do not need to take specified paths to reach their destinations. Because they can take any of multiple available paths to their destinations without coordination by the involved

---

[12] *See In re Federal-State Joint Board on Universal Service*, Report and Order, 12 FCC Rcd 8776, 9178-19, ¶ 785 (1997) (exchange access is a telecommunications service); *In re Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17,633, 18,105-17, ¶ 956 (2011) (irrespective of how VoIP services are classified, the service they purchase from LECs is exchange access).

[13] *See* AT&T Comments at 11.

providers, there are rarely reasons for any particular transmission provider to seek to deny access to its network. In addition, for much of the data transmitted on the public Internet (such as loading webpages, or transmitting files), the consumer experience is tolerant of any *de minimis* delays or disruptions that might arise as the result of data packets' taking less-efficient routes. Therefore, in most cases, any competitive advantage a particular provider might enjoy from controlling the most efficient path to transmit a competitor's data is minimal. The combination of these market features provides pricing discipline that prevents any one provider from seeking to extract unreasonable concessions in connection with peering arrangements. Indeed, because the market for Internet peering services is essentially competitive, Charter strongly agrees that such arrangements should be negotiated on a commercial basis without regulatory interference.

Conversely, very little of the above is true for voice service. Although VoIP services might utilize the same IP protocol as data that is transmitted over the public Internet, the resemblance largely ends there. With the exception of over-the-top providers that depend upon the public Internet for transmission (and therefore cannot provide the same quality-of-service guarantees that customers expect from facilities-based providers), VoIP calls do not travel over the public Internet. Rather, they utilize managed IP networks that interconnect with the PSTN. To provide consistent and reliable VoIP service that meets customer expectations, each entity involved in the transmission of a voice call must be able to guarantee a level of service that prevents an excessive number of packets from being dropped or delayed. Internet Protocol, conversely, is a "best effort" delivery system not designed to accommodate quality-of-service guarantees. Put simply, reliable and quality fixed interconnected VoIP service requires coordination among networks in a way that the public Internet does not. This need for coordination replicates the same bottlenecks that exist on the PSTN: unlike the public Internet, a

competitive VoIP provider cannot circumvent an ILEC that imposes monopoly conditions on interconnection by simply routing its transmissions through alternate channels – the alternate channels would be unable to deliver the same quality call. Although it might be feasible in some markets for competitive providers to coordinate interconnection with one another in IP or to arrange for quality-of-service guarantees with alternate providers, the transaction costs of such interconnection (just like in the TDM context) make it impractical in the majority of markets.

AT&T focuses on the fact that many ILECs no longer control the same share of the residential market that they once did.[14] However, ILECs continue to enjoy substantial market power in the interconnection context not only because they control the ability to originate calls from and terminate calls to their own subscribers (which, despite the overall reduced residential market share of some ILECs, is still very substantial relative to competitive providers in virtually every local market). Rather, ILECs continue to exercise such leverage also because they generally control access to calls originating or terminating from subscribers of other competitive providers that for historical reasons interconnect with the ILEC. Accordingly, while it might be theoretically possible for a multitude of competitive providers to each interconnect with one another, the transaction costs of such an approach prevent it from being a viable option in the foreseeable future. Thus, a narrow focus on residential market share, as AT&T urges, understates the extent to which there remain substantial imbalances in many markets between the traffic volume controlled (directly or indirectly) by ILECs and traffic controlled by smaller competitive providers seeking interconnection. This issue is of particular importance to Charter, which, because its customer base is widely dispersed, may control only a small portion of traffic

[14] *See* AT&T Comments at 9 & Ex. A.

in many of the markets where it depends upon interconnection with the ILEC to remain competitively viable.

CONCLUSION

For the reasons stated above, Charter urges the Commission, as part of any proceeding arising out of AT&T's and/or NTCA's Petitions, to clarify IP interconnection rights and ensure that competitive providers are able to interconnect in IP on reasonable terms.

Respectfully Submitted,

Mark E. Brown
Senior Director and Senior Counsel
Charter Communications, Inc.
11720 Amber Park Drive, Suite 160
Alpharetta, GA 30009
(770) 754-5269

Michael R. Moore
Senior Director and Senior Counsel
Charter Communications, Inc.
12405 Powerscourt Dr.
St. Louis, MO 63131
(314) 543-2414

/s/ Samuel L. Feder
Samuel L. Feder
Luke C. Platzer
JENNER & BLOCK LLP
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-6000

February 25, 2013

EXHIBIT D

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
Establishing Just and Reasonable Rates for Local Exchange Carriers	)	WC Docket No. 07-135
	)	
High-Cost Universal Service Support	)	WC Docket No. 05-337
	)	
Developing a Unified Intercarrier Compensation Regime	)	CC Docket No. 01-92
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	
Lifeline and Link-Up	)	WC Docket No. 03-109
	)	

COMMENTS
OF
CHARTER COMMUNICATIONS, INC.

Mark E. Brown
Senior Director and Senior Counsel
Charter Communications, Inc.
11720 Amber Park Drive, Suite 160
Alpharetta, GA 30009
(770) 754-5269

K.C. Halm
Davis Wright Tremaine LLP
1919 Pennsylvania Ave., NW
Suite 800
Washington, DC 20006
(202) 973-4287

Michael R. Moore
Director and Senior Counsel
Charter Communications, Inc.
12405 Powerscourt Dr.
St. Louis, MO 63131
(314) 543-2414

February 24, 2012

TABLE OF CONTENTS

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
Establishing Just and Reasonable Rates for Local Exchange Carriers	)	WC Docket No. 07-135
	)	
High-Cost Universal Service Support	)	WC Docket No. 05-337
	)	
Developing a Unified Intercarrier Compensation Regime	)	CC Docket No. 01-92
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	
Lifeline and Link-Up	)	WC Docket No. 03-109
	)	

COMMENTS OF CHARTER COMMUNICATIONS, INC.

Charter Communications, Inc. ("Charter") hereby submits comments on certain issues raised in Sections XVII(M)-(R), (interconnection and intercarrier compensation related issues) of the Further Notice of Proposed Rulemaking ("FNPRM") issued by the Federal Communications Commission ("FCC" or "Commission") in the above-captioned dockets.[1]

INTRODUCTION AND SUMMARY

As the Commission considers important next steps in the implementation of its planned bill-and-keep regime, it recognizes that additional steps are necessary to ensure that Internet Protocol ("IP")-based networks can, and will, be deployed to support the provision of advanced

[1] *In the Matter of Connect America Fund, et al.*, Report and Order & Further Notice of Proposed Rulemaking, FCC 11-161 (rel. Nov. 18, 2011) ("*Order and FNPRM*").

services in the future. This, however, will not occur without direct intervention by the Commission. Such intervention can occur immediately, simply by affirming and enforcing current statutes and regulations.

In particular, the Communications Act and Commission rules require incumbent local exchange carriers ("ILECs") to interconnect with competitors' networks in IP format. The Commission can facilitate the further deployment and expansion of all-IP networks simply by making clear that Section 251(c)(2) of the Act permits competitors to establish IP interconnection arrangements with ILECs for the exchange of voice traffic. In so doing, the Commission can affirm the continued application of a pro-competitive network interconnection regime that has fostered competitive entry and growth over the last fifteen years. Notably, this action does not require the immediate development of new rules and regulations applicable to such IP interconnection arrangements. Instead, because current interconnection and traffic exchange regulations are framed in a technology neutral fashion, they can be applied to IP interconnection arrangements in the same way they are applied to today's TDM-based interconnection arrangements.

Upon affirmation of the basic statutory right to establish IP interconnection arrangements, the Commission can then turn to consideration of whether it should modify key network architecture rules. Most significantly, the Commission should reconsider the continued utility of LATA-based boundaries in defining point of interconnection ("POI") obligations of interconnected providers. Building upon existing law, the Commission should affirm that competitive providers are entitled to establish a single POI per state on the ILEC's network. In conjunction with this policy, the Commission should also define network edge principles in a manner that does not undermine Congress' determination that incumbent LECs must

accommodate competitors' request for interconnection at "any technically feasible point" on the ILEC's network.

Finally, these reforms should be accompanied by a Commission decision that transit traffic (and associated services) is subject to Section 251(c), just like other network interconnection and traffic exchange arrangements. Federal courts and numerous state commissions have already so ruled. However, absent further action from the Commission, competitors will continue to operate under a patchwork set of conditions which vary from state to state. While competition is emerging for transit services in some markets, many mid-sized and small rural markets are served only by the ILEC, and lack any competitive alternatives. As a result, competitors continue to incur significant costs in delivering their traffic to third parties through incumbent tandem switches in these markets. Accordingly, the Commission should affirm that Section 251(c)(2) applies to transit services, and requires that such services be provided at TELRIC rates.

I. THE COMMISSION SHOULD AFFIRM THAT SECTION 251(c)(2) REQUIRES ILECS TO PROVIDE IP-TO-IP INTERCONNECTION

The Commission's Order recognizes the operational and policy benefits associated with IP-to-IP interconnection, and that such arrangements are a "critical" component of the Commission's goal of achieving an all-IP network.[2] Evidence in the record supports this conclusion.

For example, by enhancing the efficient exchange of voice traffic, IP-to-IP interconnection will facilitate the deployment of voice-over-Internet protocol ("VoIP") services in unserved areas. Further, by mandating the availability of such arrangements the Commission will ensure the eventual elimination of existing IP-to-TDM conversion costs. That, in turn, will

[2] *Order and FNPRM* at ¶ 1010.

ultimately reduce the outlay of CAF funds necessary to provide supported voice services.[3]

Significantly, the Commission has recognized that its efforts to promote the development of an all-IP network would be thwarted if ILECs continue to refuse to provide IP-to-IP interconnection arrangements.[4] Accordingly, the question before the Commission now is not whether, but when and how, rights to IP-to-IP interconnection will be clarified and enforced.

A. Section 251(c)(2) Provides the Necessary Authority to Mandate IP-to-IP Interconnection

Section 251(c)(2) of the Communications Act provides sufficient authority for the Commission to mandate the availability of IP-to-IP interconnection. As the Commission recognizes, the language of Section 251 is technology neutral, and its mandates "do not vary based on whether one or both of the interconnecting providers is using TDM, IP, or another technology in their underlying networks."[5] Similarly, nothing in the statute limits a carrier's statutory interconnection obligations to the exchange of ***only*** circuit-switched voice traffic. Indeed, to the contrary, the Commission recognizes that "the interconnection obligations set forth in Section 251(c)(2) apply to packet-switched services as well as circuit-switched services."[6]

An ILEC's duty under Section 251(c)(2) to provide interconnection for "any requesting telecommunications carrier . . . at any technically feasible point within the [ILEC's] network"[7] clearly encompasses IP-to-IP interconnection arrangements. There is no dispute that IP-to-IP interconnection is "technically feasible," as it is commonly used in interconnection arrangements

[3] *See* Cablevision and Charter Comments on FNPRM CAF Support Issues; WC Docket 10-90, *et. seq*. at 1-2 (filed Jan. 18, 2012).
[4] *Order and FNPRM* at ¶¶ 1009-11.
[5] *Id.* at ¶¶ 1342, 1381.
[6] *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Order on Remand, 15 FCC Rcd 385, ¶ 22 (1999) ("*Advanced Services Order*"), *remanded on other grounds*, *WorldCom, Inc. v. FCC*, 246 F.3d 690 (D.C. Cir. 2001).
[7] 47 U.S.C. § 251(c)(2)(B).

between VoIP service providers today.[8] The largest ILECs, including AT&T, Verizon and CenturyLink, have themselves acknowledged they could readily accommodate IP-to-IP interconnection, thereby dispelling any assertion that such interconnection arrangements are not technically feasible.[9] And the Commission recognizes that Congress intended that ILECs "must accept the novel use of, and modification to, its network facilities to accommodate the interconnector."[10]

Furthermore, Section 251(c)(2) requires ILECs to provide interconnection "for the transmission and routing of telephone exchange service and exchange access."[11] The record in related proceedings demonstrates that the provision of VoIP service constitutes "telephone exchange service" or "exchange access" regardless of whether VoIP is classified as an information service or a telecommunications service.[12] The Communications Act defines the term "telephone exchange service" as "service within a telephone exchange, or within a connected system of telephone exchanges within the same exchange area operated to furnish to subscribers intercommunicating service of the character ordinarily furnished by a single

[8] *See* Cablevision and Charter Comments; WC Docket No. 11-119 at 6 (filed Aug. 15, 2011) (citing David Sims, *Voice Peering Report Considers Future of Telecom Network Interconnection*, TMCNET.COM (July 18, 2011), *at* http://www.tmcnet.com/channels/voice-peering/articles/198152-voice-peering-report-considers-future-telecom-network-interconnection.htm (describing a report that "analyzes the VoIP peering strategies of eight leading VoIP service providers" and describes "VoIP peering" as "enabl[ing] direct network interconnection without using the PSTN"). Note that the peering arrangements cited here demonstrate that IP-to-IP interconnection arrangements are technically feasible. However, Charter is not suggesting that the Commission regulate such arrangements or that such arrangements between competitors are sufficient for CLEC – ILEC IP interconnection arrangements.

[9] *See, e.g., Order and FNPRM* at ¶ 1388 (noting the existence of IP service offerings of incumbent LECs and their affiliates); *see also* Comments of AT&T, Inc., WC Docket No. 10-90, at 24-25 (filed Apr. 18, 2011) (describing "the marketplace for transit and peering services" for VoIP to be "robustly healthy"); Comments of CenturyLink, WC Docket No. 10-90, at 72 (filed Apr. 18, 2011) (discussing the "the current compensation schemes that govern interexchange of all-IP traffic").

[10] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499 ¶ 202 (1996). *See also, id*. ¶ 206 ("[T]he Act does not permit incumbent LECs to deny interconnection . . . for any reason other than a showing that it is not technically feasible.").

[11] 47 U.S.C. § 251(c)(2)(A).

[12] *See* Cablevision and Charter Comments; WC Docket No. 11-119 at 9 (filed Aug. 15, 2011).

exchange, and which is covered by the exchange service charge."[13] Although the Commission has suggested that this term is a subset of "telecommunications service," there is no textual basis for such a conclusion.[14]

To the contrary, the Commission has previously held that the term "telephone exchange service" is not limited to circuit-switched technology, and applies equally to packet-switched services.[15] And at least one court has agreed: "[I]t is clear that the FCC does not intend to limit telephone exchange service to traditional telephone services or technologies."[16]

The same principles apply to exchange access service, a service provided to other carriers defined by the Act as the "origination or termination of telephone toll services."[17] As the Second Circuit has held, this service is defined by the geographic end points of the call, and does not turn on how the calls are priced, or the technology used.[18] CLECs that carry VoIP traffic – whether to their own customers or to VoIP providers – are clearly providing IXCs with the ability to place calls to, and receive calls from, retail VoIP customers in other telephone exchanges. That basic functionality clearly satisfies the statutory definition of exchange access service – and hence the interconnection criteria under Section 251(c)(2).

Additionally, regardless whether VoIP is itself "telephone exchange service and exchange access," Section 251(c)(2) ***does not limit*** the use of the interconnection to those

---

[13] 47 U.S.C. § 153(47)(A).

[14] Although some ILECs argue that VoIP service providers cannot obtain interconnection under Section 251(c)(2) because the provision of retail VoIP service is not a telecommunications service, that argument fails as a matter of law and policy. Indeed, as networks increasingly shift to use VoIP technology, this logic – if accepted – would eventually erode interconnection rights under Section 251entirely as more carriers rely on IP networks to carry their voice traffic which cannot be the intent of the Telecommunications Act of 1996.

[15] *Advanced Services Order* at ¶ 22; *see also Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Order on Remand, 15 FCC 385 at ¶ 22 (1999) ("*Advanced Services Remand Order*").

[16] *BellSouth Telecomm. Inc. v. Finley*, 2010 U.S. Dist. LEXIS 131839 at * 33 (E.D.N.C. Dec. 10, 2010).

[17] 47 U.S.C. § 153(16).

[18] *Global NAPs v. Verizon New England*, 454 F.3d 91, 98 (2nd Cir. 2000).

services.[19] Once a carrier is otherwise entitled to interconnection, it may also use that interconnection arrangement to support other services that would not themselves give a provider interconnection rights.[20] As the Commission has explained in an analogous context, "the fact that a telecommunications carrier is also providing a non-telecommunications service is not dispositive of its rights."[21]

Finally, the nondiscrimination principles codified in Section 251(c)(2) require ILECs to provide interconnection "that is at least equal in quality to that provided to itself or any subsidiary [or] affiliate."[22] The record reflects that many ILECs currently provide IP-to-IP interconnection internally or to subsidiaries or affiliates.[23] Accordingly, because ILECs maintain IP interconnection arrangements today for their own (or their affiliates') use, the statute compels those entities to provide such arrangements under 251(c)(2).[24]

---

[19] The Commission should limit the application of IP interconnection mandates to voice traffic.

[20] Section 251(c)(2) applies so long as the *ILEC* is providing telephone exchange service or exchange access using communications routed through the interconnection. The plain language of the statute requires only that the interconnection be "for the transmission and routing of telephone exchange service." It does not require the *requesting carrier*, rather than the ILEC, be the one providing those services. Therefore, the ILECs' obligations also apply when the requesting carrier seeks interconnection in order to make available to its subscribers *the ILEC's* telephone exchange service or exchange access. The FCC previously suggested just such an interpretation when it held that because it had determined certain ILEC services to be telephone exchange service or exchange access, "incumbent LECs must provide requesting carriers with interconnection pursuant to Section 251(c)(2)" with respect to those services. The same logic applies to carriers transmitting VoIP traffic. *See, e.g.*, Cablevision and Charter Comments, WC Docket 11-119 at 12-13 (filed Aug. 15, 2011).

[21] *Time Warner Cable Request for Declaratory Ruling that Competitive Local Exchange Carriers May Obtain Interconnection Under Section 251 if the Communications Act of 1934, as Amended, to Provide Wholesale Telecommunications Services to VoIP Providers*, Memorandum Opinion and Order, 22 FCC Rcd 3513, n. 39 (2007).

[22] 47 U.S.C. § 251(c)(2).

[23] *See, e.g.*, Comments of COMPTEL, WC Docket No. 10-90 at 7 (filed Apr. 18, 2011) (citing evidence that "[t]he three largest incumbent LEC enterprises – AT&T, Verizon and CenturyLink/Qwest – all have extensive IP networks but have resisted allowing their competitors to interconnect on an IP-to-IP basis for the exchange of VoIP traffic pursuant to Section 251").

[24] As Charter has explained in prior comments, the Commission has extended various other provisions of Title II to VoIP without addressing the regulatory classification question, and can do the same here without formally classifying VoIP as telecommunications or an information service. The classification of VoIP as a telecommunications service has potentially sweeping regulatory and jurisdictional implications. Such a fundamental policy determination, aside from being unwise, is not necessary in order to confirm the availability of IP-to-IP interconnection for VoIP traffic. Cablevision and Charter Reply Comments, WC Docket 11-119 at 5-6 (filed Aug. 30, 2011).

B. The Commission Should Look to Current Regulations as the Basis for Identifying Issues to Address in Any New IP Interconnection Regime

1. *The Commission Should Affirm that Current Network Interconnection Rules and Principles Apply to IP Interconnection Arrangements*

The Commission can facilitate the transition to all IP-networks by first affirming that the ***current*** network interconnection rules of Section 251(c)(2) and FCC regulations apply to IP-to-IP interconnection. These rules have played a key role in the development of a competitive voice market across a variety of technology platforms (wireline, wireless, and cable). Those principles include: (1) the basic right to interconnect; (2) at any technically feasible point; (3) on just and reasonable terms at; (4) at cost-based rates. These core principles have provided the means for competitive voice providers of all kinds (CLECs, VoIP, and CMRS providers) to compete in virtually every market in the country.[25] Section 251 and FCC regulations have aided competitive entry because these rules are (largely) technology agnostic, and reflect the fact that Section 251 mandates interconnection pursuant to pro-competitive ***principles***, rather than specific proscriptive rules.[26] These principles and can be applied to IP-based networks just as they have been applied to TDM-based networks, and their application to IP-based networks will provide operational certainty for next generation voice providers. Although certain rule modifications may be in order, including those described elsewhere in this pleading,[27] this approach obviates the need for wholesale revisions to existing rules and eliminates the need for

[25] *See, e.g.*, FCC LOCAL TELEPHONE COMPETITION REPORT, WCB, at 1 (rel. Oct. 2011) ("… the use of VoIP technology is growing rapidly and it is increasingly used to provide local telephone service."); *see also*, p. 31 (map showing VoIP competitors by state as of December 31, 2010), *and* Table 8 at p. 19 (identifying total end user switched access lines and VoIP subscribers by state). Recognizing the important role that interconnection plays in fostering competition, the FCC has established rules that permit competitors to obtain any "technically feasible method of interconnection" with ILECs, "at any particular point upon request." *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, First Report and Order, 11 FCC Rcd 15499, ¶ 553 (1996) ("*Local Competition Order*").

[26] For example, the statute defines a competitors' right to interconnect with an incumbent's network at "any technically feasible point" on the network, rather than at specifically designated location(s). Also, the statute requires that such interconnection be subject to nondiscriminatory treatment at just, reasonable cost-based rates.

[27] *See* Section II, *infra*, at p. 10.

new rulemakings, proceedings or contested cases concerning potential new rules for interconnection of IP networks.

2. *Costs of IP-TDM Conversion*

In conjunction with its decision to affirm the application of existing network interconnection principles to IP networks, the Commission should establish a rule providing that the costs of any continued IP to TDM conversion must be borne by ILECs that choose to continue to utilize TDM-based technology.

The record shows that ILECs' refusal to provide IP-to-IP interconnection allows them to shift to competitors part of the costs associated with the ILECs' maintenance of legacy TDM networks.[28] That, in turn, reduces any incentives the ILECs may have to convert their legacy networks into more efficient IP networks.[29] The Commission's proposed cost conversion rule[30] is therefore necessary to ensure that ILECs which refuse to provide IP interconnection arrangements do not benefit financially from their failure to accommodate such arrangements.[31]

Of course, some ILECs will argue that requiring incumbents to provide IP-to-IP interconnection under Section 251(c)(2) would be unfair as it will shift the costs of IP/TDM conversion to incumbents. But such an outcome, in fact, furthers the Commission's stated goals of promoting the deployment of advanced communications networks by increasing incentives to eliminate costs associated with TDM conversion. Moreover, the fact that ILECs require more efficient carriers to bear the burden of TDM conversion penalizes efficiency and provides disincentives for ILECs to transition to all IP networks.

---

[28] *See* Cablevision and Charter Comments on FNPRM CAF Support Issues; WC Docket 10-90, *et. seq*. at 3 (filed Jan. 18, 2012).
[29] *Id*.
[30] *Order and FNPRM* at ¶ 1341.
[31] Similarly, the ILECs should not be permitted to shift their costs of any necessary network upgrades arising from this Commission decision to competitive providers.

II. THE COMMISSION MUST PRESERVE, AND ADAPT, FUNDAMENTAL INTERCONNECTION RIGHTS GOING FORWARD

The Commission recognizes that the implementation of a bill-and-keep regime raises important questions concerning rules governing network interconnection and related issues.[32] In particular, the Commission notes that questions regarding the establishment of minimum points of interconnection (POIs) and defining the network edge must be resolved.

A. Points of Interconnection

The Commission properly recognizes that Section 251(c)(2)(B) establishes a general rule with respect to interconnection points between incumbent and competitive provider networks. Specifically, the statute requires an ILEC to permit a requesting telecommunications carrier to interconnect at any technically feasible point on the ILEC's network, including at a ***single*** point of interconnection ("POI") per LATA.[33] This rule, and several other rules stemming from the principles of Section 251(c), must be preserved under the new bill-and-keep end state. Affirmation of this principle under a fully implemented bill-and-keep regime will ensure that providers can utilize the most efficient network interconnection architectures to reduce operational costs and maximize network assets.[34]

Further, in affirming the application of the so-called "single POI" rule, the Commission should consider modifying the rule to reflect the realities of today's communications networks. Specifically, to further enhance competition and increase incentives to deploy all-IP networks, the Commission should modify the single POI rule in a manner that reflects technological

[32] *Order and FNPRM* at ¶ 1315.
[33] *Id*. at ¶ 1316.
[34] As this Commission has recognized, "Congress intended to obligate the incumbent [LEC] to accommodate the new entrant's network architecture" and that the ILEC "must accept the novel use of, and modification to, its network facilities to accommodate the interconnector." *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499 ¶ 202 (1996). *See also, id*. ¶ 206 ("[T]he Act does not permit incumbent LECs to deny interconnection . . . for any reason other than a showing that it is not technically feasible.").

developments which allow service providers to aggregate and transport greater amounts of traffic on their networks. In particular, the Commission should modify the rule to permit competitive LECs to interconnect at a single POI per state. As carriers continue to deploy IP-based network assets, and the costs of transport continue to decline, further efficiencies can be achieved by consolidating interconnection points within a single state, or even a multi-state metropolitan region. For example, carriers operating in Illinois and serving Chicago, and surrounding markets, may choose to establish a single POI to carry all traffic in Illinois and other traffic to, or from, northern Indiana.

As other commenters have explained, there is no rational basis for continuing the application of the single POI rule on a LATA-wide basis, or based on other artificial distinctions.[35] Instead, the interconnection of networks and exchange of traffic should occur at the point which allows for the greatest network efficiencies.

Similarly, the Commission should reject proposals to require the use of multiple POIs based upon traffic volumes, or other similar limitations. For example, some ILECs that use traffic volumes to dictate the number of POIs fail to recognize that IP-based networks are scalable, can transport very high volumes of traffic, and permit the aggregation of traffic at levels above that which was technically feasible in the past.[36] Their proposal, if accepted, simply increases network deployment costs for competitors while eliminating the inherent efficiencies of scalable, high-capacity IP networks.[37]

[35] *See, e.g.*, Sprint Nextel *Ex Parte*, WC Docket 10-90, *et. seq.* at 8 (filed July 29, 2011).
[36] *See, e.g.*, *Order and FNPRM* at 1318 (noting CenturyLink's proposal to use traffic volumes to dictate number, and location, of POIs).
[37] The proposal also ignores the fact that a single POI per state, or region, is technically feasible.

The Commission also questions the application of a single POI rule to rural carriers, some of whom may not be subject to Section 251(c).[38] Specifically, the Commission seeks additional information about the nature of interconnection agreements with rurals today. Charter applauds the Commission for focusing on these issues, and addressing the important interconnection issues associated with serving rural and less-densely populated markets.

Charter's network serves many of those rural and less-densely populated areas. As a result, Charter must interconnect directly, or indirectly, with each of the many rural carriers operating in each of these markets. The vast majority of Charter's interconnection agreements (which includes traffic exchange agreements for the exchange of extended local traffic) with rural carriers are the result of negotiations governed by Section 251 and 252 principles.[39] Charter also utilizes indirect interconnection arrangements to exchange traffic with rural carriers, but such arrangements are usually only available when the traffic volume is very low.[40]

Charter's experience with these rural ILECs illustrates some of the inherent challenges associated with serving these areas. Those challenges are even more significant when the rural ILEC operates multiple subsidiaries in a particular state, and then requires Charter (and other competitors) to obtain interconnection agreements with each subsidiary. Instead, CLECs should be allowed to interconnect their network at one POI within a state to exchange traffic with each of the ILEC's affiliates located in that state, provided the rural ILEC's networks in that state are interconnected for any reason.[41]

---

[38] *Order and FNPRM* at ¶ 1317.

[39] These agreements are obtained through both the negotiation/arbitration and adoption processes available under Section 252.

[40] For example, many agreements state that indirect interconnection may only be used for traffic that does not exceed a single DS1 of volume, over a three month period.

[41] Further, if the ILEC's affiliates are interconnected to exchange toll traffic, or for any other reason, they should be required to allow CLECs to exchange local traffic over separate trunks.

Some LECs use this organizational structure (of maintaining multiple affiliates in one state) to increase operational and administrative costs for competitors interconnecting with such entities, and requiring interconnection with each subsidiary, even though all subsidiaries are owned and controlled by the same parent company. The Commission can eliminate this problem simply by affirming that the single POI rule applies to ILECs with multiple operating entities in the same state.[42]

B. Network Edge Principles

The Commission tentatively concludes that a critical aspect of an effective bill-and-keep regime is properly defining the location, and parameters, of a so-called network "edge."[43] Under a bill-and-keep regime, the edge will define transport and interconnection obligations of two interconnected carriers exchanging traffic, and will serve as the demarcation point for each carrier's obligation to deliver traffic to the other carrier.[44] The Commission concludes that state commissions will be responsible for establishing network edge rules pursuant to FCC guidance.[45]

The development of network "edge" proposals must not improperly favor incumbents. Prior edge proposals were seen by many as inequitable and would have discouraged forward-looking, efficient network interconnection arrangements. To avoid similar problems, the Commission must ensure that any network edge rules include several key principles. First, edge rules must recognize and reflect the guiding principles of Section 251(c), including: the right to direct interconnection with any telecommunications carrier; at any technically feasible point on

[42] This principle should be applied to all incumbent LECs, unless otherwise exempt from the duties of Section 251(c). Of course, small rural ILECs operating with only a single entity in any particular state would not be affected by the proposed rule change. . The economics of traffic exchange using single POI arrangements is consistent with the policy rationale for bill and keep because each carrier is forced to recover its own network costs from its own end users, not other carriers. This mandate should be imposed immediately.
[43] *Order and FNPRM* at ¶ 1320.
[44] *Id*.
[45] *Id*.

the network, including at a ***single*** point on the incumbent's network; at cost-based rates (if any).[46]

Second, any new edge rules cannot favor the continued use of hierarchical, circuit-switched networks, but must instead recognize the implementation of soft switches, and distributed switching architectures, used in IP-based networks. Failure to recognize the importance of this principle could undermine the Commission's goal of accelerating the deployment of all-IP networks. Accordingly, adoption of a "competitively neutral" location must not undermine existing interconnection rights. Prior rulings on this issue recognize that incumbents have incentives to manipulate network interconnection arrangements in order to increase competitors' costs of entry and network deployment. To avoid the same problems, a competitively neutral edge location should be technology, or platform, agnostic and recognize that carriers have network components (i.e., media gateways, or trunking media gateways) that differ from incumbent networks but which perform the same essential functions. Further, a competitively neutral location must include a location where competitors have competitive alternatives, other than the incumbent, to transport traffic to the terminating carrier's network.

Third, the Commission should establish default rules regarding competitively neutral locations, which the parties can modify only upon mutual agreement. The use of default rules intended to support competitive entry and network deployment is a useful mechanism for ensuring that incumbent LECs don't use their market power, or incumbent status, to improperly raise competitors' costs, or slow the deployment of all IP networks.[47]

---

[46] Consistent with other arguments herein, this obligation should apply to ILECs that operate multiple affiliates in a single state such that competitors need only establish a single POI with the ILEC's affiliates in that state.

[47] Alternatively, the Commission should consider whether a network "edge" paradigm is appropriate given the ubiquity of modern networks, and the declining marginal costs of transport. Given the network topology and geographic reach of today's networks, including the fact that these networks consist of cores (routers / switches) and "tentacles" (loops or other last mile connections), is the notion of a network "edge" a false premise? Because modern networks overlay one another to a great extent, and do not exist solely in adjacent geographic areas, there

III. THE COMMISSION MUST TRANSITION OTHER RATE ELEMENTS TO BILL AND KEEP TO ENSURE RATE PARITY AND ELIMINATE OPPORTUNITIES FOR ARBITRAGE

A. *All Transport Rate Elements Should be Subject to Bill and Keep*

The Commission did not address the transition for all transport charges, leaving open the question of the appropriate transition for tandem switching and transport charges in those areas where the price cap carrier does not own the tandem in the serving area.[48]

All of these transport rate elements must be transitioned to a bill-and-keep end state, consistent with the treatment of end office switching rate elements under the Order. There is no basis in the record, or otherwise, for continuing the application of these transport charges beyond the current transition period. Accordingly, all tandem switching and transport rates should be reduced at a pace that coincides with the current schedule for transitioning end office switching rates.

If these transport rates remain in place after bill and keep is fully implemented for end office rate elements, opportunities for arbitrage or improper cost-shifting will likely arise. For example, ILECs will have incentives to shift costs from end office functions to transport and tandem switching functions in order to increase competitive carriers' traffic exchange costs. Absent further action from the Commission to reduce all transport rate elements to bill and keep, within the same timeframe as terminating end office switching rates, ILECs will have the opportunity to raise rivals' costs and charge rates above the incremental costs of transmission.

No evidence in the record suggests that the reduction of these remaining transport rates

---

are many potential points at which two parties can interconnect for the exchange of traffic. Any point at which the two networks overlay one another is, in theory, a technically feasible point of interconnection. That point of interconnection may be the most efficient point of interconnection and traffic exchange, regardless of the location of either provider's network "edge." Further, because the marginal costs of additional transport are very low (some would say close to zero) transport of traffic should not dictate interconnection policy. Instead, the primary question should be what is the most efficient point for the two providers to interconnect their networks for the exchange of traffic?

[48] *Order and FNPRM* at ¶¶ 1306-10.

merits a special exception to the Commission's conclusion that carriers look to their customers, rather than other carriers, to pay for the costs of carrying calls on its network. On top of these concerns is the fact that transport rate elements appear to have little rational relation to the incremental cost of transporting traffic on these networks.

B. *Transit Rate Elements Should be Subject to Similar Treatment as Other Rate Elements and Regulated Under Section 251(c)*

The Commission's sweeping reform of intercarrier compensation touched on nearly all aspects of the existing intercarrier compensation regime. Over the course of the next 6 to 8 years, nearly all rate elements associated with the exchange of traffic will be transitioned to a bill-and-keep arrangement.

However, one aspect of current traffic exchange arrangements was noticeably absent from the scope of reforms: compensation for transit services. The record in the prior proceeding demonstrates that transit costs are a significant operational cost for competitive carriers operating in rural and less densely populated areas.[49] Absent further FCC action on compensation for such services, transit providers will have the opportunity, and incentive, to exploit their ubiquitous network dominance by raising transit service rates on competitors like Charter.

The record in the prior proceeding reveals that there is no independent, verifiable market data demonstrating that the market for transit services is competitive in all markets.[50] Until the market for such services is fully competitive, as demonstrated by independent verifiable data, the Commission must affirm that incumbent LECs must provide transit services pursuant to Section 251. That statute provides sufficient legal authority for the Commission to direct incumbent LECs to provide transit services under just and reasonable terms in accordance with 251(c) interconnection obligations. Finally, the application of TELRIC-based rates to transit obligations

[49] *See* Charter Reply Comments, WC Docket 10-90, *et. seq*., at 16 (filed May 23, 2011).
[50] *Id*. at 10-12.

is consistent with Commission precedent, and will ensure that unreasonably high transit rates do not undermine the Commission's attempts to unify and reduce intercarrier compensation rates.

1. *Because the Market for Transit Services Is Not Competitive in All Areas of the Country, the Commission Must Assert Its Jurisdiction Over Transit Services and Establish a Uniform Rule*

The Commission asks whether the transit market "demonstrates the hallmarks of a competitive market."[51] Evidence in the record demonstrates that transit services may "demonstrate the hallmarks" of a competitive service in ***some*** large markets, but such services are not competitive in ***all*** markets, or for ***all*** ILEC networks, across the nation. Although a small number of entities offer transit service in competition with the ILECs, such services do not exist in ***every*** market in which competitors operate. As such, while there may be ***some*** competition in larger and mid-sized markets that is not true in smaller, rural and less densely populated markets.

More significantly, one provider of transit services, Neutral Tandem, acknowledged in its 2010 annual report that the company is "unable to provide accurate market share information," concerning the scope of competition because "no regulatory body or industry association requires carriers to identify amounts of voice traffic to other carrier types."[52] Hence, mere anecdotal evidence of the scope of competition in the transit market must be weighed against the fact that the leading competitive provider of transit services admits that there is ***no independent verifiable data*** concerning the scope of competitive transit services.[53]

Neutral Tandem has also argued that the number of markets it serves "demonstrates the existence of robust competition" in the transit services market. However, Charter and other

[51] *Order and FNPRM* at ¶ 1313.
[52] *See* Neutral Tandem, Inc. 2010 Form 10-K Annual Report at 8 (for period ending 12/31/10), (available at: http://www.neutraltandem.com/investorRelations/index.htm) (emphasis added). The company explained that such information does not exist, in part because no regulatory body or industry association requires carriers to identify the amounts of voice traffic delivered to other carrier types, or compiles market data regarding such arrangements.
[53] This may explain why, of the more than one hundred and seventy parties filing comments to the NPRM in WC Docket 10-90, only one party, Neutral Tandem, asserts that the market for transit services is "competitive."

market participants have demonstrated that such assertions are misleading and exaggerated. For example, Neutral Tandem's claims to have connections to "more than 100 of the largest national and regional telecommunications carriers" actually reveals that the company has connections to only eight (8%) percent of all incumbent LECs operating in the nation.[54]

Further, as Charter explained in prior comments, because competitive transit providers do not have ubiquitous network coverage (like the incumbent LECs) in smaller, rural markets, Charter is often forced to obtain transit services through the incumbent LECs in these markets. The limited availability of competitive transit services in these smaller, rural markets reveals that assertions regarding the competitive nature of these services are misleading. For example, Neutral Tandem asserts that it provides service in the majority of LATAs across the nation. Although that may be true, it does not mean the company has connections to ***each*** of the ILECs (rural or otherwise) that may serve one of the thousands of communities in any particular LATA. Because LATAs are generally large geographic areas, and in some states one LATA covers virtually the entire state (e.g., Mississippi, New Mexico, Utah and Wyoming), simply having a connection within that LATA does not demonstrate that the company offers ubiquitous competitive transit services in all markets within the LATA.

In fact, as Charter explained in prior comments, while some markets may have one or more competitive transit provider offering service, many smaller Tier 2 or Tier 3 rural markets do not have a second transit provider.[55] So the question of whether, and where, competition may exist is one which should be addressed on a more granular basis, preferably on a market-by-market basis, over time.

The lack of any independent verifiable data reflecting actual levels of competition in the

[54] *See Charter Ex Parte*, WC Docket 10-90, *et. seq*. at 2 (filed Oct. 21, 2011).
[55] Charter Comments, WC Docket 10-90, *et. seq*. at 10 (filed Apr. 18, 2011).

market at this time supports the comments filed by those parties asserting that the Commission must affirm transit as a Section 251(c) obligation. Although a number of states, and now two federal courts, have affirmed that incumbent LECs are obligated to provide transit pursuant to Section 251(c), the lack of a clear ***national*** mandate forces competitors to operate under a patchwork of rules that vary from state to state.[56]

Finally, if the market for competitive transit services develops in the future, such that many of the individual markets are truly competitive, the Commission can use its forbearance authority to remove unnecessary regulations in those particular markets.[57] The forbearance process provides a useful mechanism for the Commission (and interested providers) to review relevant data, on a market-by-market basis, to ensure that transit providers are not burdened with unnecessary regulations if discrete regional markets for those services are one day fully competitive.[58]

2. *The Commission Should Follow the Rulings of Several Federal Courts and Find That Section 251 Obligations Extend to Transit Services*

The Commission also asks what legal framework is appropriate for the regulation of transit services.[59] This question has been raised, and resolved, in a number of other forums. Notably, two federal courts[60] and numerous state Commission have all found that transit services

---

[56] For example, favorable state rulings allow competitors like Charter to obtain transit services from AT&T in Arkansas and Texas (for example), but the lack of similar rulings in neighboring states, such as Oklahoma or Louisiana leaves competitors without recourse in those jurisdictions. The Commission can remedy this problem by affirming that incumbent LECs have transit obligations under Section 251(c) on a national basis.

[57] That approach is consistent with the FCC's approach for analyzing competitive issues surrounding unbundling obligations of incumbent LECs. *See Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Omaha Metropolitan Statistical Area*, Memorandum Opinion and Order, 20 FCC Rcd 19415 at ¶ 57 (2005) ("*Omaha Forbearance Order*").

[58] *See id*. at ¶ 13.

[59] *Order and FNPRM* at ¶ 1313.

[60] *See Southern New England Tel. Co. d/b/a AT&T Connecticut v. Anthony J. Perlermino, et. al.*, No. 3:09-cv-1787, 2011 U.S. Dist. LEXIS 48773 at * 8 (Dist. Ct. May 6, 2011) ("… the 1996 Act and its attendant regulations should be interpreted so as to promote competition.") ("*SNET*")*; and, Qwest v. Cox Nebraska Telecom, LLC*, 2008 U.S. Dist. LEXIS 102032 (D. Neb. 2008).

are governed by Section 251(c).[61]

Federal courts in Connecticut and Nebraska affirmed state commission determinations that all ILECs have the obligation to provide transit under Section 251(c)(2), as a matter of law. Further, the federal court in Connecticut recognized that any other decision would undermine the purpose and intent of the statute: to promote competition.[62] The Connecticut federal court's decision implicitly recognizes that mandating transit obligations under Section 251(c) is good public policy. Similarly, this Commission has recognized that the availability of transit arrangements ensures that competitors can deploy efficient network and traffic exchange arrangements, rather than be forced to construct duplicative or redundant infrastructure in order to exchange traffic with third-party providers.[63]

Finally, as other commenting parties have also explained, Section 251(c)(2) requires ILECs to interconnect with any requesting telecommunications carrier "for the transmission and routing of telephone exchange service and exchange access."[64] The traffic referenced in this statute is not limited to traffic related to the ILECs' own customers, and can clearly be read to include third-party provider's traffic that arises in a transit situation. As such, nothing in that statute limits the scope of an ILEC's obligation, or precludes the reasonable conclusion that transit traffic is covered under this statute.

---

[61] *See, e.g.*, Charter Comments, WC Docket 10-90, *et. seq*. at 11-12 (citing Nebraska federal district court decision, and state PSC cases affirming transit obligations).

[62] *See SNET*, 2011 U.S. Dist. LEXIS 48773 at * 8 ("… the 1996 Act and its attendant regulations should be interpreted so as to promote competition.") (citing *Mich. Bell Telephone Co. v. Covad Communs. Co*., 597 F.3d 370, 387 (6th Cir. 2010)). The District Court of Connecticut also relied upon the reasoning and conclusions of the District Court of Nebraska, which has also ruled that transit obligations arise from Section 251, as a matter of law. *See, e.g*., *Qwest v. Cox Nebraska Telecom, LLC*, 2008 U.S. Dist. LEXIS 102032 (D. Neb. 2008).

[63] *See In the Matter of Developing A Unified Intercarrier Compensation Regime*, Notice of Proposed Rulemaking, 20 FCC Rcd 4685 at ¶ 125 (2005) ("Without the continued availability of transit service, carriers that are indirectly interconnected may have no efficient means by which to route traffic between their respective networks.").

[64] *See* Level 3 Communications LLC Comments at 19-21.

3. *Transit Rates Should be Subject to TELRIC Pricing Principles*

Because Section 251(c)(2) does extend to transit services, the Commission is duty bound to affirm that TELRIC pricing principles apply to such services. Interconnection obligations arising under Section 251(c)(2) are, of course, subject to the pricing standards of Section 252(d)(1)(A). The Supreme Court has affirmed this Commission's determination that the appropriate pricing standard under this section of the statute is TELRIC, and that TELRIC-based rates permit ILECs reasonable cost recovery.[65] For that reason, application of TELRIC rates would ensure that ILECs are "adequately compensated" for the use of their networks. Given that transit is covered by Section 251(c)(2), it is subject to the same pricing standard applicable to all other interconnection related services: TELRIC.

More significantly, it would be a significant mistake for the Commission to ignore TELRIC pricing principles while attempting to unify and reduce other call transport and termination rates. The Commission's decision to unify and reduce nearly all call transport and termination rates represents a major step towards rationalizing today's intercarrier compensation system. However, in so doing, the Commission cannot ignore the fact that transit rates are a significant component of many provider's total transport and termination costs.

Because many competitive providers of wireline, wireless and VoIP services utilize transit arrangements to exchange traffic with other providers, these providers must pay the tandem provider for providing the transit functionality. That functionality permits providers to deliver their originating traffic to terminating providers more cost effectively than being forced to establish a direct interconnection with hundreds, if not thousands, of other ILECs, CLECs and wireless providers throughout the country, and in this way serves as an essential component of enhancing competitive voice communications. Consequently, in addition to transport and

[65] *Verizon Commus., Inc. v. FCC*, 535 U.S. 467, 507 (2002).

termination fees, many competitive providers also incur transit costs as a component of their intercarrier compensation costs.

If the Commission leaves transit rates unregulated, the LECs -- which continue to dominate this market -- would have largely unrestrained power to price transit services at rates far exceeding TELRIC. As a result, even where the Commission's terminating rate reduction policies were implemented, competitive providers would still likely face higher transit costs that would vary across jurisdictions (depending upon which incumbent LEC serves that particular market). Rational policymaking requires the FCC to set these rates on a national basis at forward-looking costs consistent with its nascent policy to unify and reduce per-minute charges. Reducing transport and termination rates, while leaving intermediate transit functions unregulated, would (i) simply perpetuate the rate arbitrage opportunities the Commission seeks to eliminate, (ii) create a bottleneck one step higher in the network (at the tandem), and (iii) empower transit providers to assess higher charges without restraint.

IV. CONCLUSION

For the foregoing reasons, the Commission should adopt the policies outlined in these comments, including the imposition of IP-to-IP interconnection rights under Section 251(c)(2); affirmation of the application of that statute to transit services; and the development of a single POI rule and other related network interconnection architecture rules which reflect current, and future, network technology.

Respectfully Submitted,

/s/ K.C. Halm

K.C. Halm
Davis Wright Tremaine LLP
1919 Pennsylvania Ave., NW
Suite 800
Washington, DC 20006
(202) 973-4287

Mark E. Brown
Senior Director and Senior Counsel
Charter Communications, Inc.
11720 Amber Park Drive, Suite 160
Alpharetta, GA 30009
(770) 754-5269

Michael R. Moore
Director and Senior Counsel
Charter Communications, Inc.
12405 Powerscourt Dr.
St. Louis, MO 63131
(314) 543-2414

On behalf of
Charter Communications, Inc.

February 24, 2012

EXHIBIT E

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Petition for Declaratory Ruling that tw telecom inc. has the Right to Direct IP-to-IP Interconnection Pursuant to Section 251(c)(2) of the Communications Act, and Amended, and for Transmission and Routing of tw telecom's Facilities-Based VoIP Services and IP-in-the-Middle Voice Services	)	WC Docket No. 11-119

COMMENTS OF CABLEVISION SYSTEMS CORPORATION AND CHARTER COMMUNICATIONS, INC.

Michael E. Olsen
Vice President,
Legal and Regulatory Affairs
Cablevision Systems Corp.
1111 Stewart Avenue
Bethpage, NY 11714
(516) 803-2300

Howard J. Symons
Ernest C. Cooper
MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.
701 Pennsylvania Avenue, N.W.
Suite 900
Washington, D.C. 20004
(202) 434-7300

Mark E. Brown
Senior Director and Senior Counsel
Charter Communications, Inc.
11720 Amber Park Drive, Suite 160
Alpharetta, GA 30009
(770) 754-5269

Samuel L. Feder
JENNER & BLOCK LLP
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-6000

Michael R. Moore
Director and Senior Counsel
Charter Communications, Inc.
12405 Powerscourt Drive
St. Louis, MO 63131
(314) 543-2414

August 15, 2011

TABLE OF CONTENTS

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Petition for Declaratory Ruling that tw telecom inc. has the Right to Direct IP-to-IP Interconnection Pursuant to Section 251(c)(2) of the Communications Act, and Amended, and for Transmission and Routing of tw telecom's Facilities-Based VoIP Services and IP-in-the-Middle Voice Services	)	WC Docket No. 11-119

COMMENTS OF CABLEVISION SYSTEMS CORPORATION AND CHARTER COMMUNICATIONS

Cablevision Systems Corporation ("Cablevision") and Charter Communications, Inc. ("Charter") hereby submit these comments in the above-captioned proceeding.[1/] Cablevision and Charter support time warner telecom inc.'s ("TWTC's") request that the Commission clarify that section 251(c)(2) of the Communications Act obligates incumbent local exchange carriers ("ILECs") to provide direct IP-to-IP interconnection to competitive local exchange carriers ("CLECs") for the transport and termination of Voice over Internet Protocol ("VoIP") traffic.[2/] Cablevision and Charter disagree, however, with TWTC's contention that the Commission must classify facilities-based VoIP service as a "telecommunications service" to achieve this result.

1/ *See Comment Sought on tw telecom inc. Petition for Declaratory Ruling Regarding Direct IP-to-IP Interconnection Pursuant to Section 251(c)(2) of the Communications Act*, WC Docket No. 11-119, Public Notice, DA 11-1198 (2011).

2/ *See* Petition for Declaratory Ruling that tw telecom inc. has the Right to Direct IP-to-IP Interconnection Pursuant to Section 251(c)(2) of the Communications Act, and Amended, and for Transmission and Routing of tw telecom's Facilities-Based VoIP Services and IP-in-the-Middle Voice Services, WC Docket No. 11-119 (filed June 30, 2011) ("TWTC Petition").

INTRODUCTION AND SUMMARY

The Communications Act and Commission rules require ILECs to accept traffic from competing providers and to provide interconnection to their networks in Internet protocol ("IP"), but many ILECs refuse to recognize this obligation. ILECs' refusal to honor their section 251(c) obligations forces competing CLECs to incur additional network costs and inhibits the Commission's goal of encouraging carriers to migrate to more efficient IP-based networks. Accordingly, as Cablevision and Charter have previously explained, the Commission should make the IP-to-IP interconnection obligation explicit to stop anticompetitive conduct by ILECs and ensure that consumers enjoy the full benefits of IP services and networks.

TWTC argues, correctly, that section 251(c)(2) of the Communications Act requires ILECs to provide IP-to-IP interconnection to requesting CLECs. This requirement applies irrespective of whether the requesting CLEC is requesting IP-to-IP interconnection in support of its own retail VoIP offerings, or for purposes of offering services to VoIP providers. The requested ruling is simply the application of the basic pro-competitive framework and precepts of the Telecommunications Act of 1996 to the realities of today's networks.

TWTC is wrong, however, in asserting that the Commission must declare retail facilities-based VoIP service to be a "telecommunications service" in order to entitle CLECs to IP-to-IP interconnection for the exchange of VoIP traffic with an ILEC. Commission decisions in the context of interconnection and other rights obtained under sections 251(a) and (b) make clear that if a CLEC is otherwise entitled to interconnect and exchange traffic with an ILEC under section 251, the CLEC is entitled to use that same interconnection in support of its own retail VoIP services, or to provide wholesale services to VoIP providers. The same logic should control with respect to interconnection under section 251(c). Under the Act and Commission

precedent, the statutory classification of the retail VoIP service ultimately offered to end-users, either by the CLEC itself or by its wholesale customers, is irrelevant to the CLEC's IP interconnection rights.

Although section 251(c)(2) requires that the requesting carrier use the requested interconnection "for the transmission and routing of telephone exchange service and exchange access,"[3/] this condition does not require the Commission to classify VoIP as a telecommunications service. This is so for several reasons. *First*, as explained below, interconnected VoIP services are "telephone exchange services" under the Act, and requesting carriers providing VoIP services directly or to VoIP provider customers offer "exchange access" services to other carriers – regardless whether retail VoIP service is an "information service" or a "telecommunications service."). A requesting carrier may therefore use IP-to-IP interconnection to provide its own VoIP service or to make that interconnection available on a wholesale basis to interconnected VoIP providers.

Second, regardless whether VoIP traffic itself is "telephone exchange service" or "exchange access," a requesting carrier using interconnection with the ILEC to provide telephone exchange service and exchange access with respect to non-VoIP traffic is entitled to use that same interconnection for VoIP traffic.

Finally, it does not matter at all whether the requesting carrier or its VoIP provider customer is providing "telephone exchange service" or "exchange access" if *the ILEC* is doing so. Section 251(c) does not differentiate between the requesting carrier and the ILEC with respect to the provision of telephone exchange service or exchange access – it requires only that the interconnection be "for the transmission and routing of telephone exchange service and

---

3/ 47 U.S.C. § 251(c)(2).

exchange access." As long as the ILEC is providing those services, it has a duty to interconnect under Section 251(c).

Cablevision and Charter thus urge the Commission to affirm, as TWTC requests, that ILECs have the duty under section 251(c)(2) to provide IP-to-IP interconnection. But the Commission need not, and should not, base this ruling on the regulatory classification of retail VoIP services. Whether those services are "telecommunications services" or "information services" has been under consideration by the Commission for at least seven years.[4/] It has far-reaching implications beyond the issues raised by the Petition. As set forth in more detail below, the Commission need not address this issue in order to rule on section 251(c)(2) as TWTC requests.

I. SECTION 251(c)(2) REQUIRES ILECS TO PROVIDE IP-TO-IP INTERCONNECTION

Direct IP-to-IP interconnection would enable facilities-based VoIP providers to realize the bandwidth efficiencies of their IP networks, deliver traffic through a fewer number of interconnection points, and avoid the unnecessary costs and inefficiencies associated with down-conversion to TDM that currently results from the ILECs' refusal to accept traffic in IP format. As Cablevision, Charter, and many other commenters explained in the *USF/ICC Proceeding*, however, ILECs have refused to accommodate IP-to-IP interconnection requests.[5/] ILECs' failure to recognize their statutory duty to provide IP-to-IP interconnection causes inefficiency,

---

4/ *See, e.g., IP-Enabled Services*, Notice of Proposed Rulemaking, 19 FCC Rcd 4863, ¶¶ 42-70 (2004); *Connect America Fund, et al.*, Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, 26 FCC Rcd 4554, ¶ 73 (2011) ("*USF/ICC Proceeding*").

5/ *See Connect America Fund, et al.*, WC Docket No. 10-90, Reply Comments of Cablevision Systems Corporation, at 2-3 (filed May 23, 2011) ("Cablevision Reply Comments") (citing comments submitted in the same docket by COMPTEL, Cox Communications, EarthLink, PAETEC, and Sprint Nextel, each identifying ILEC resistance to provision of IP-to-IP interconnection to requesting carriers); *Connect America Fund, et al.*, WC Docket No. 10-90, Reply Comments of Charter Communications, Inc., at 6-8 (filed May 23, 2011) ("Charter Reply Comments").

increases VoIP providers' costs, and degrades call quality by adding unnecessary failure points. It requires VoIP providers to convert calls to TDM, a less efficient means of transmitting calls, and then purchase, lease, or build circuit switch-compatible trunks to deliver the call to the points of interconnection ("POIs").[6/] Indeed, ILECs obtain a competitive advantage over VoIP providers, and CLECs that carry VoIP traffic, precisely by forcing them to incur these unnecessary costs.

It is already the FCC's policy to "encourage the shift to IP-to-IP interconnection where efficient."[7/] The Commission should take the next logical step and declare that offering IP interconnection when requested by a CLEC is required by section 251(c). In addition to stopping anticompetitive behavior by ILECs, this clarification of the statutory requirement will provide a strong incentive for ILECs to upgrade their own networks in order to avoid the costs of converting traffic to TDM. Indeed, IP interconnection will also support the Commission's objective of an overall reduction in access rates by reducing ILECs' interconnection, transport, and termination costs.

The Communications Act and existing FCC precedent clearly supports an IP-to-IP interconnection requirement. *First*, section 251(c)(2) is technology neutral; it requires "interconnection with the local exchange carrier's network" without limiting that obligation to the use of any particular technology. Indeed, the Commission has previously held that "the interconnection obligations set forth in section 251(c)(2) apply to packet-switched services as well as circuit-switched services."[8/] Contrary to the statute, it is neither "just" nor "reasonable"

6/ *See* Cablevision Reply Comments at 3. *See also* TWTC Petition at 5-6.

7/ National Broadband Plan at 49, Recommendation 4.10.

8/ *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Order on Remand, 15 FCC Rcd 385, ¶ 22 (1999) ("*Advanced Services Order*"), *remanded on other grounds WorldCom, Inc. v. FCC*, 246 F.3d 690 (D.C. Cir. 2001).

for ILECs to force CLECs to go through the cumbersome and expensive process of downconverting their traffic to TDM in order to interconnect.[9/]

Second, an ILEC's duty under section 251(c)(2) to provide interconnection for "any requesting telecommunications carrier . . . at any technically feasible point within the [ILEC's] network"[10/] clearly includes a requirement for IP-to-IP interconnection. IP-to-IP interconnection is "technically feasible." It is commonly used in direct interconnection between VoIP service providers,[11/] and many LECs use it as well. AT&T has already offered direct IP interconnection to its switched access service in at least one LATA,[12/] and large ILECs like AT&T and CenturyLink have themselves suggested they could readily accommodate IP-to-IP interconnection, removing any argument that such interconnection arrangements are not technically feasible.[13/] In any event, "Congress intended to obligate the incumbent [LEC] to accommodate the new entrant's network architecture" and that the ILEC "must accept the novel use of, and modification to, its network facilities to accommodate the interconnector."[14/] IP-to-IP interconnection falls squarely within this principle.

9/ *See* 47 U.S.C. § 251(c)(2)(D) (requiring that interconnection under section 251(c) must be on "terms, and conditions that are just, reasonable, and nondiscriminatory").

10/ 47 U.S.C. § 251(c)(2).

11/ *See, e.g.*, David Sims, *Voice Peering Report Considers Future of Telecom Network Interconnection*, TMCNET.COM (July 18, 2011), *at* http://www.tmcnet.com/channels/voice-peering/articles/198152-voice-peering-report-considers-future-telecom-network-interconnection.htm (describing a report that "analyzes the VoIP peering strategies of eight leading VoIP service providers" and describes "VoIP peering" as "enabl[ing] direct network interconnection without using the PSTN").

12/ *See Connect America Fund, et al.*, WC Docket No. 10-90, Comments of EarthLink, Inc., at 5 (filed Apr. 18, 2011).

13/ *See, e.g., Connect America Fund, et al.*, WC Docket No. 10-90, Comments of AT&T, Inc., at 24-25 (filed Apr. 18, 2011) (describing "the marketplace for transit and peering services" for VoIP to be "robustly healthy"); *Connect America Fund, et al.*, WC Docket No. 10-90, Comments of CenturyLink, at 72 (filed Apr. 18, 2011) (discussing the "the current compensation schemes that govern interexchange of all-IP traffic").

14/ *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499 ¶ 202 (1996). *See also, id.* ¶ 206 ("[T]he Act does not permit

Third, ILECs are required by section 251(c)(2) to provide interconnection "that is at least equal in quality to that provided to itself or any subsidiary [or] affiliate."[15/] Many ILECs currently provide IP-to-IP interconnection internally or to subsidiaries or affiliates.[16/] Their withholding of such interconnection to competing carriers is therefore illegal under the plain terms of the statute.

II. THE COMMISSION SHOULD CLARIFY THAT CARRIERS ARE ENTITLED TO INTERCONNECTION UNDER SECTION 251(c)(2) FOR THE EXCHANGE OF VOIP TRAFFIC WITHOUT CLASSIFYING VOIP AS A "TELECOMMUNICATIONS SERVICE"

The Commission should formally declare that a carrier's right to interconnect under section 251(c) extends to interconnection for purposes of exchanging VoIP traffic. Although some ILECs argue that VoIP service providers cannot obtain interconnection under section 251(c)(2) because the provision of retail VoIP service is not a telecommunications service, that argument fails as a matter of both law and policy. Indeed, as networks increasingly shift to use VoIP technology, this logic – if accepted – would eventually erode interconnection rights under section 251entirely.

The statutory classification of retail VoIP service is irrelevant under the statute. The FCC has already made clear that telecommunications carriers have the right to interconnect with ILECs under sections 251(a) and 251(b) of the Communications Act for the purpose of

---

incumbent LECs to deny interconnection . . . for any reason other than a showing that it is not technically feasible.").

15/ 47 U.S.C. § 251(c)(2).

16/ *See, e.g., Connect America Fund, et al.*, WC Docket No. 10-90, Comments of COMPTEL, at 7 (filed Apr. 18, 2011) (citing evidence that "[t]he three largest incumbent LEC enterprises – AT&T, Verizon and CenturyLink/Qwest – all have extensive IP networks but have resisted allowing their competitors to interconnect on an IP-to-IP basis for the exchange of VoIP traffic pursuant to Section 251").

exchanging VoIP traffic.[17/] The exact same logic should apply with respect to Section 251(c)(2) interconnection rights, and the Commission should so hold.

Like the prior rulings regarding subsections (a) and (b) of section 251, such a clarification with respect to ILEC duties under subsection (c) "will advance the Commission's goals in promoting facilities-based competition as well as broadband deployment" because "interconnection is a critical component for the growth of facilities-based local competition."[18/] Failure to do so, by contrast, "would impede the important development of wholesale telecommunications and facilities-based VoIP competition, as well as broadband investment and deployment, by limiting the ability of wholesale carriers to offer service."[19/]

TWTC suggests that, if retail VoIP service is an information service, section 251(c)(2) cannot apply because that provision requires an ILEC to interconnect with a requesting telecommunications carrier "for the transmission and routing of telephone exchange service and exchange access."[20/] According to TWTC, these are common carrier services and thus the Commission must declare VoIP to be a telecommunications service in order to extend ILECs' subsection (c)(2) duties to VoIP service. As demonstrated below, however, that assessment is wrong for multiple reasons.

17/ *See generally Time Warner Cable Request for Declaratory Ruling that Competitive Local Exchange Carriers May Obtain Interconnection Under Section 251 if the Communications Act of 1934, as Amended, to Provide Wholesale Telecommunications Services to VoIP Providers*, Memorandum Opinion and Order, 22 FCC Rcd 3513 (2007) ("*Time Warner Cable Order*"); *Petition of CRC Communications of Maine, Inc. and Time Warner Cable Inc. for Preemption Pursuant to Section 253 of the Communications Act, as Amended*, Declaratory Ruling, 26 FCC Rcd 8629 (2011) ("*Maine PUC Order*")

18/ *Time Warner Cable Order* ¶ 13

19/ *Cf. Maine PUC Order* ¶ 26 (affirming *Time Warner Cable Order*).

20/ 47 U.S.C. § 251(c)(2).

A. Carriers Are Entitled to Section 251(c)(2) Interconnection for VoIP Traffic Because Interconnected VoIP Service Is "Telephone Exchange Service and Exchange Access Service."

Section 251(c)(2) requires an ILEC to provide interconnection "for the transmission and routing of telephone exchange service and exchange access."[21/] CLECs are entitled to section 251(c)(2) interconnection rights (including the right to request IP-to-IP interconnection) for VoIP traffic because, regardless whether VoIP is an information service or a telecommunications service, the provision of VoIP service constitutes "telephone exchange service" or "exchange access."[22/]

The Communications Act defines the term "telephone exchange service" as "service within a telephone exchange, or within a connected system of telephone exchanges within the same exchange area operated to furnish to subscribers intercommunicating service of the character ordinarily furnished by a single exchange, and which is covered by the exchange service charge."[23/] Although the Commission has suggested that this term is a subset of "telecommunications service," there is no textual basis for such a conclusion. Indeed, the

---

21/ 47 U.S.C. § 251(c)(2)(A).

22/ Despite the use of the term "and" in section 251(c)(2)(A), the Commission has held that a service need only provide one of "telephone exchange service" or "telephone access" for purposes of section 251(c)(2), not both. *See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, First Report and Order, 11 FCC Rcd 15499, ¶ 184 (1996) ("We conclude that the phrase 'telephone exchange service and exchange access' imposes at least three obligations on incumbent LECs: an incumbent must provide interconnection for purposes of transmitting and routing telephone exchange traffic or exchange access traffic or both.").

23/ 47 U.S.C. § 153(47)(A). The statute also includes "comparable service" in the definition as an alternate, *see* 47 U.S.C. § 153(47)(B), but it is not necessary to use that alternate for this analysis. *See BellSouth Telecomm. Inc. v. Finley*, 2010 U.S. Dist. LEXIS 131839, *35-36 (E.D. N. Car., 2010) ("47 U.S.C. § 153(47) is written in the disjunctive, so that [a] service qualifies as telephone exchange service if it satisfies either part (A) or part (B) of the statute."). Notably, only the alternate definition of telephone exchange service in subparagraph (B) refers to "telecommunications service," but even this alternative definition does not provide that the "comparable service" itself must be a telecommunications service. Rather, it is defined as service by which a subscriber "can *originate or terminate* a telecommunications service" (emphasis added).

Commission has specifically held that the term "telephone exchange service" is not limited to circuit-switched technology, and applies equally to packet-switched services.[24/] As one court explained after reviewing previous Commission rulings on the statutory definition, "[I]t is clear that the FCC does not intend to limit telephone exchange service to traditional telephone services or technologies."[25/]

The requirement that the service be provided within a telephone exchange has been held to mean simply that the "service must be 'local' in nature, as opposed to a 'toll' service."[26/] Interconnected VoIP service providers typically offer an "intercommunicating service" within a defined geographic area similar to a telephone exchange. Similarly, the requirement that the service be "covered by the exchange service charge" is used "only for the purposes of distinguishing whether or not a service is local," and the requirement is met by any charge assessed for originating and terminating services within the equivalent of an exchange area.[27/] VoIP service providers typically assess such a charge. The Commission has noted on several occasions the similarity of interconnected VoIP service to local exchange service provided by traditional telephone companies.[28/]

24/ *Advanced Services Order* ¶ 22.

25/ *BellSouth Telecomm. Inc. v. Finley* at *33.

26/ *Id.* at *25.

27/ *Advanced Services Order* ¶ 27.

28/ *See, e.g.*, *IP-Enabled Services*, Report and Order, 24 FCC Rcd 6039, ¶ 8 (2009); *Telephone Number Requirements for IP-Enabled Service Providers*, Report and Order, Declaratory Ruling, Order on Remand, and Notice of Proposed Rulemaking, 22 FCC Rcd 19531, ¶ 18 (2007); *Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996: Access to Telecommunications Service, Telecommunications equipment and Customer Premises Equipment by Persons with Disabilities*, Report and Order, 22 FCC Rcd 11275, ¶ 17 (2007); *Implementation of the Telecommunications Act of 1996: Telecommunications Carriers' Use of Customer Proprietary Network Information and Other Customer Information*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 6927, ¶ 56 (2007); *E911 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245, ¶ 23 (2005).

The same is true with respect to exchange access service, which is a service provided to other carriers defined by the Act as the "origination or termination of telephone toll services."[29/] As the Second Circuit has held, this requirement is satisfied by the geographic end points of the call and does not turn on how the calls are priced.[30/] CLECs that carry VoIP traffic – whether to their own customers or to VoIP providers – are clearly providing IXCs with the ability to place calls to, and receive calls from, retail VoIP customers in other telephone exchanges, thereby satisfying the statutory definition of exchange access service – and hence the interconnection criteria under Section 251(c)(2).

B. Regardless Whether VoIP is Telephone Exchange Service or Exchange Access, the Commission Should Declare That Carriers Otherwise Providing Telephone Exchange Service or Exchange Access Are Entitled to Section 251(c)(2) Interconnection for Any VoIP Service Traffic They May Also Be Carrying.

Regardless whether VoIP is telephone exchange service or exchange access, carriers otherwise providing telephone exchange service or exchange access are entitled to section 251(c)(2) interconnection for any VoIP service traffic they may also be carrying. While section 251(c)(2) requires an ILEC to provide interconnection "for the transmission and routing of telephone exchange service and exchange access," the provision does not *limit* the use of the interconnection to those services. Once a carrier is entitled to interconnection at all, it may also use the interconnection in support of other services that would not otherwise give a carrier interconnection rights. As the Commission has explained, "the fact that a telecommunications carrier is also providing a non-telecommunications service is not dispositive of its rights."[31/] Indeed, the Commission's rules provide that "[a] telecommunications carrier that has

---

29/ 47 U.S.C. § 153(16).

30/ *See Global NAPs v. Verizon New England*, 454 F.3d 91, 98 (2d Cir. 2000).

31/ *Time Warner Cable Order* n.39.

interconnected or gained access under section[ ] 251(a) . . . of the Act, may offer information services through the same arrangement, so long as it is offering telecommunications services through the same arrangement as well."[32/]

The Commission can and should apply the same logic, recently affirmed in *Maine PUC*, to interconnection obtained under section 251(c)(2), and declare that so long as a carrier is otherwise providing telephone exchange service or exchange access, it may obtain interconnection with an ILEC under section 251(c)(2) and utilize that interconnection for VoIP traffic regardless whether VoIP itself falls within these categories. Indeed, many CLECs that carry VoIP traffic carry traditional circuit-switched traffic as well, and interconnect with ILECs to exchange both. As explained above, those rights the carrier obtains under section 251(c)(2) would include a right to IP-to-IP interconnection.

C. Carriers Are Entitled to Section 251(c)(2) Interconnection for VoIP Service Traffic Because the ILEC Is Providing Telephone Exchange Service and Exchange Access.

Finally, irrespective of whether the *requesting* carrier (or any VoIP provider to which it provides wholesale services) is providing telephone exchange service or exchange access, section 251(c)(2) applies so long as the *ILEC* is providing telephone exchange service or exchange access using communications routed through the interconnection. The plain language of the statute requires only that the interconnection be "for the transmission and routing of telephone exchange service." It does not require the *requesting carrier*, rather than the ILEC, be the one providing those services.[33/] Thus, the ILECs' obligations also apply when the requesting

---

[32/] 47 C.F.R. § 51.100(b).

[33/] *Cf. Bright House Networks, LLC v. Verizon Cal., Inc.*, Memorandum Opinion and Order, 23 FCC Rcd 10704 (2008), *aff'd Verizon California, Inc. v. FCC*, 555 F.3d 270 (D.C. Cir. 2009) (determining that the statutory phrase "recei[ving] . . . information from another carrier for purposes of providing any telecommunications service" refers both to information received for purposes of the receiving carrier's

carrier seeks interconnection in order to make available to its subscribers *the ILEC's* telephone exchange service or exchange access. The FCC previously suggested just such an interpretation when it held that because it had determined certain ILEC services to be telephone exchange service or exchange access, "incumbent LECs must provide requesting carriers with interconnection pursuant to section 251(c)(2)" with respect to those services.[34/] The same logic applies to carriers transmitting VoIP traffic.

CONCLUSION

For the reasons explained above, the Commission should grant TWTC's request to affirm that section 251(c)(2) affords requesting carriers a right to IP-to-IP interconnection with the ILEC. This clarification should be based, however, on one or more of the clear legal bases described above, rather than on TWTC's suggestion that the declaration be based on classification of VoIP as a telecommunications service.

---

provision of a telecommunications service as well as where information is received for purposes of the submitting carrier's provision of such service).

34/ *Advanced Services Order* ¶ 11.

Respectfully submitted,

/s/ Howard J. Symons

Howard J. Symons
Ernest C. Cooper
MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.
701 Pennsylvania Avenue, N.W.
Suite 900
Washington, D.C. 20004
(202) 434-7300

Michael E. Olsen
Vice President,
Legal and Regulatory Affairs
Cablevision Systems Corp.
1111 Stewart Avenue
Bethpage, NY 11714
(516) 803-2300

Mark E. Brown
Senior Director and Senior Counsel
Charter Communications, Inc.
11720 Amber Park Drive, Suite 160
Alpharetta, GA 30009
(770) 754-5269

Samuel L. Feder
JENNER & BLOCK LLP
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-6000

Michael R. Moore
Director and Senior Counsel
Charter Communications, Inc.
12405 Powerscourt Drive
St. Louis, MO 63131
(314) 543-2414

August 15, 2011

EXHIBIT F

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
Connect America Fund	)	WC Docket No. 10-90
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
Establishing Just and Reasonable Rates for Local Exchange Carriers	)	WC Docket No. 07-135
High-Cost Universal Service Support	)	WC Docket No. 05-337
Developing an Unified Intercarrier Compensation Regime	)	CC Docket No. 01-92

REPLY COMMENTS OF CABLEVISION SYSTEMS CORPORATION

Michael E. Olsen
Vice President,
Legal and Regulatory Affairs
Elana Shapochnikov
Senior Regulatory Counsel
Cablevision Systems Corp.
1111 Stewart Avenue
Bethpage, NY 11714
(516) 803-2300

Howard J. Symons
Kemal Hawa
Ernest C. Cooper
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
701 Pennsylvania Avenue, N.W.
Suite 900
Washington, D.C. 20004
(202) 434-7300

Samuel L. Feder
JENNER & BLOCK LLP
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-600

May 23, 2011

TABLE OF CONTENTS

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
Connect America Fund	)	WC Docket No. 10-90
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
Establishing Just and Reasonable Rates for Local Exchange Carriers	)	WC Docket No. 07-135
High-Cost Universal Service Support	)	WC Docket No. 05-337
Developing an Unified Intercarrier Compensation Regime	)	CC Docket No. 01-92

REPLY COMMENTS OF CABLEVISION SYSTEMS CORPORATION

Cablevision Systems Corporation ("Cablevision") hereby submits these reply comments in the above-captioned proceeding,[1/] specifically addressing the Commission's request for proposals to promote interconnection in Internet protocol ("IP") format ("IP-to-IP interconnection").[2/]

INTRODUCTION AND SUMMARY

In its initial comments, Cablevision demonstrated that the Communications Act and the Commission's rules require incumbent local exchange carriers ("ILECs") to accept traffic from an interconnecting provider in IP format (*i.e.*, provide IP-to-IP interconnection). Other than the three remaining Regional Bell Operating Companies, commenters agree that making explicit the existing statutory requirement for IP-to-IP interconnection will ensure that consumers enjoy the

1/ *Connect America Fund, et al.*, Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, 76 FR 11632 (2011) ("NPRM").

full benefits of IP services and networks, and will encourage all carriers to migrate to IP-based networks.

The RBOCs' insistence that "market-based negotiations" alone will produce IP-to-IP interconnection agreements ring hollow in light of their steadfast refusal to enter into such agreements despite the willingness of many other providers to do so. Despite the declaration from each of the RBOCs that there is no need for the Commission to issue an order or clarification requiring IP-to-IP interconnection, none of them challenge the Commission's authority to issue such and order.

The Commission should act now to affirm the applicability of section 251(c)(2) to requests for IP-to-IP interconnection. This clarification would not only achieve the goal of promoting IP-to-IP interconnection, but would also further the Commission's broader goal of encouraging greater broadband deployment and the National Broadband Plan's objective of ensuring that every American has access to broadband capability.[3/]

I. NUMEROUS COMMENTERS SUPPORT COMMISSION ACTION CLARIFYING A RIGHT TO IP-TO-IP INTERCONNECTION IN ORDER TO ENHANCE NETWORK EFFICIENCY AND BROADBAND DEPLOYMENT

The Commission has recognized that "fundamentally, the long-term approach to intercarrier compensation reform . . . must be consistent with the exchange of traffic on an IP-to-IP basis" because IP-to-IP interconnection is a "more efficient form[ ] of interconnection."[4/] Yet, as Cablevision and others noted, it is currently common for ILECs to require IP traffic to be downconverted to the inferior and less efficient time division multiplexing

---

2/ *Id.* ¶¶ 678, *et seq.*

3/ National Broadband Plan at xi.

4/ NPRM ¶ 527.

("TDM") format as a condition of interconnection with an ILEC's network.[5/] This *de facto* ILEC requirement to interconnect in legacy TDM format to exchange traffic is an expensive and inefficient process, inimical to encouragement of conversion to all-IP networks.[6/]

As the comments demonstrate, the network efficiency associated with IP is lost without access to IP-to-IP interconnection.[7/] The additional costs imposed on IP voice providers by ILEC insistence on receiving voice traffic in non-native TDM format "can cause a significant increase in the cost of a project to upgrade a carrier's internal network facilities to IP"[8/] and create extensive ongoing costs in the form of increased transport costs, the need for additional points of interconnection ("POIs"), as well as the continuing costs of maintaining protocol conversion equipment.[9/] The Commission has recognized that "IP interconnection can be more efficient" and that "the transition to IP can result in cost savings, including reductions in circuit costs, switch costs, space needs, and utility costs, as well as the elimination of other signaling overhead."[10/] This conclusion is affirmed by multiple commenters.[11/]

5/ *See, e.g.*, Cablevision Comments at 3-4; COMPTEL Comments at 7 ("The three largest incumbent LEC enterprises – AT&T, Verizon and CenturyLink/Qwest – all have extensive IP networks but have resisted allowing their competitors to interconnect on an IP-to-IP basis for the exchange of VoIP traffic pursuant to Section 251."); Cox Communications Comments at 18-19; EarthLink Comments at 3 ("Although IP technology is already widely deployed within the industry, carrier interconnections in IP for voice services have lagged internal network deployments due in large part to incumbent LEC refusals to negotiate IP interconnection."); PAETEC, et al. Comments at 4 ("[W]hat is delaying the transition to IP-to-IP interconnection is the resistance by the largest incumbent LECs . . . ."); Sprint Nextel Comments at 27 ("[E]ven ILECs that provide retail VoIP services have been reluctant, even unwilling, to discuss IP-IP interconnection with other IP network operators — even though their own customers would benefit by such interconnection.").

6/ *Cf.* NPRM ¶ 40 ("The record suggests that the current ICC system is impeding the transition to all-IP networks and distorting carriers' incentives to invest in new, efficient IP equipment.").

7/ *See, e.g.*, Cablevision Comments at 6-7; COMPTEL Comments at 5; EarthLink Comments at 3; PAETEC, et al. Comments at 3-4; XO Communications Comments at 10-11.

8/ EarthLink Comments at 3.

9/ *See, e.g.*, Cablevision Comments at 6-7.

10/ NPRM ¶ 506.

Beyond efficiency and cost factors, commenters offer evidence that the delivery of the benefits of IP networks to consumers is slowed because ILEC "maintenance of TDM interconnection facilities frustrates the rapid deployment of IP services to end users."[12/] ILECs that refuse requests for IP-to-IP interconnection and thereby shift part of the costs associated with their legacy TDM networks to competitors have less incentive to convert to more efficient IP networks.[13/] This inevitably delays implementation of the all-IP network envisioned by the Commission.[14/] The public benefit inherent in transition to all-IP networks should not be allowed to be "stymied by interconnection roadblocks unilaterally established by the Regional Bell Operating Companies" in the form of refusal to accept IP-to-IP interconnection.[15/]

Many commenters join Cablevision in urging the Commission to encourage the inevitable and desirable migration to IP-based networks by clarifying that IP-to-IP interconnection must be provided, pursuant to section 251(c)(2)(D) of the Telecommunications

---

11/ *See, e.g.*, Cablevision Comments at 6-7; PAETEC, et al. Comments at 3; Sprint Nextel Comments at 23-24;

12/ XO Communications Comments at 10. *See also, e.g.*, COMPTEL Comments at 8 ("Relieving requesting carriers of the necessity of converting VoIP traffic to TDM before passing it on to legacy ILEC networks will allow consumers to begin to fully realize the benefits and economies of IP voice technology and its more efficient use of bandwidth."); T-Mobile Comments at 17 ("LEC requirements that packet-based traffic be converted into TDM further deprive consumers of the full benefits that packet-based technologies can offer.").

13/ *See* PAETEC, et al. Comments at 4 ("[W]hat is delaying the transition to IP-to-IP interconnection is the resistance by the largest incumbent LECs that are unwilling to acknowledge such interconnection is an obligation under the 1996 Telecommunications Act and want it wholly unregulated so as to have the ability to dictate unilaterally terms of IP-to-IP interconnection that are wholly favorable to their interests.").

14/ *See* NPRM ¶ 41 (explaining that proposed reforms will "provid[e] a more certain glide path for the transition to an all-IP future"); NPRM ¶ 44 (explaining that proposed "reforms will promote investment in IP facilities and free up valuable resources, provide certainty and ultimately encourage new broadband investment and innovation"). *Cf.* National Broadband Plan at 142 ("Because providers' [ICC] rates are above cost, the current system creates disincentives to migrate to all IP-based networks. . . . While this may be in the short-term interest of a carrier seeking to retain ICC revenues, it actually hinders the transformation of America's networks to broadband.").

15/ COMPTEL Comments at 5.

Act,[16/] at rates, terms, and conditions that are just, reasonable, and non-discriminatory.[17/] There is no need to delay or create a transition period for implementation of IP-to-IP interconnection, as suggested by a few commenters.[18/] Competitive providers already commonly use IP-to-IP interconnection to exchange VoIP traffic with each other, proving there is no impediment to immediate implementation of such arrangements. "The most important action the Commission can take to attain its overarching goal of promoting the deployment of broadband and IP technology is to confirm in no uncertain terms that IP-to-IP interconnection is subject to Sections 251 and 252 of the Communications Act."[19/]

In addition to affirming a right to IP-to-IP interconnection, the Commission should clarify that where conversion to TDM is required by the ILEC's continuing maintenance of a legacy TDM network, the cost of that conversion should be borne by the ILEC as an organic cost of maintaining an outdated legacy network.[20/] ILECs that have not kept pace with modern technology should not be allowed to shift the costs of maintaining their old technology onto competitors by labeling it as a cost of interconnection rather than recognizing it as an intrinsic

---

16/ 47 U.S.C. § 251(c)(2)(D).

17/ Cablevision Comments at 2. *See also, e.g.*, Cox Comments at 19; EarthLink Comments at 3-7; PAETEC, et al. Comments at 3; Time Warner Cable Comments at 12-13; XO Communications Comments at 15-17. Other commenters support a Commission declaration of a right to IP-to-IP interconnection, but suggest such a declaration could be supported under other sections of the Communications Act. *See, e.g.*, Sprint Nextel Comments at 27 (urging a declaration under the Commission's ancillary jurisdiction and Section 706(a)); T-Mobile Comments at 21-22 (urging a declaration based on Section 201(b) ancillary authority).

18/ *See* Sprint Nextel Comments at 27-28; Time Warner Cable Comments at 12-13; T-Mobile Comments at 20-22.

19/ COMPTEL Comments at 4.

20/ *Cf*. XO Communications Comments at 32-33 (urging implementation of a five-year transition to all-IP networks during which "the costs of any IP-TDM conversion necessary would be borne by the terminating carrier").

network cost associated with failure to keep pace with modern technology through regular network upgrades.[21/]

CenturyLink claims that implementing the requirement for IP-to-IP interconnection would "impose extensive new and potentially unnecessary costs" on ILECs that have failed to upgrade their legacy TDM networks and that they therefore may "have to construct new gateways and routers and construct new fiber routes into communities."[22/] But any new gateways, routers, or fiber that an ILEC deploys to update its network to utilize IP technology are investments that the ILEC would ordinarily need to undertake to keep pace with modern technology.[23/] The Commission foresees, and the ILECs acknowledge, that conversion to all-IP networks is inevitable.[24/] The costs ILECs incur in upgrading legacy networks to utilize modern IP technology are therefore a normal and expected cost of business – costs that ultimately improve the overall health and efficiency of the public network. There is no public benefit that exists from requiring competitors to bear the costs of downgrading their signals to meet ILEC legacy standards under current rules. Thus, the Commission should no longer allow network migration costs to be shifted to competitors.

II. ABSENT COMMISSION CLARIFICATION, MARKET FORCES ARE NOT SUFFICIENT TO COMPEL ILECs TO HONOR REQUESTS FOR IP-TO-IP INTERCONNECTION

The three remaining RBOCs, no doubt content with a status quo in which they effectively offload the costs and inefficiencies of their own TDM networks on to their competitors, are unanimous in asserting that market forces are sufficient to address requests for IP-to-IP

21/ *See* Cablevision Comments at 7-8.

22/ CenturyLink Comments at 73.

23/ *See* Cablevision Comments at 7-8.

24/ *See NPRM* ¶ 41 (suggesting that intercarrier compensation reform will "provid[e] a more certain glide path for the transition to an all-IP future"); Cablevision Comments at 4.

interconnection.[25/] This unsupported assertion ignores the fact that market-based negotiations alone have failed to move any of the three RBOCs (or most of the smaller ILECs) to agree to provide IP-to-IP interconnection. While Cablevision has been able to achieve IP-to-IP interconnection agreements with many competitive providers, it has been unable to do so with any of the RBOCs.[26/] Other competitive providers report similar experiences with the RBOCs and other ILECs.[27/] The unregulated market has clearly failed to deliver the needed availability of IP-to-IP interconnection.

Correction of this market failure does not require (and Cablevision and others do not propose) a heavy hand of Commission regulation "to displace efficient market forces with prescriptive rules."[28/] A simple clarification of existing rules – declaration that section 251(c)(2) requires ILECs to provide IP-to-IP interconnection upon request of a competing provider – is all that is needed. The clarification that ILECs are required by existing rules to negotiate in good faith for IP-to-IP interconnection on rates and terms that are "just, reasonable, and nondiscriminatory"[29/] – and that the requirement will be backed up by the arbitration requirements of section 252 – should be sufficient to encourage ILECs to finally engage in serious negotiations leading to widespread adoption of IP-to-IP interconnection agreements.[30/]

25/ *See* AT&T Comments at 24-25; CenturyLink Comments at 71-73; Verizon Comments at 16-21.

26/ *See* Cablevision Comments at 3.

27/ *See* note 5, *supra*.

28/ AT&T Comments at 24.

29/ 47 U.S.C. § 251(c)(2).

30/ As suggested by COMPTEL, the Commission should also clarify that ILECs may not avoid section 251 obligations by setting up a subsidiary to deliver services that would be otherwise subject to those obligations. *See* COMPTEL Comments at 6-7.

ILECs need not fear that the Commission will "mandate the terms of IP interconnection or the conditions under which it must occur."[31/] Like all current interconnection agreements, IP-to-IP interconnection agreements will be freely negotiated between the parties within the open framework provided by the guidelines of section 251 and the dispute resolution processes of section 252. Far from supplanting the market, Commission clarification that IP-to-IP interconnection is required by section 251 would provide the necessary prod to move the market to the full functionality necessary for modern networks to fully develop.

III. IP-TO-IP INTERCONNECTION IS ALREADY REQUIRED BY EXISTING LAW.

Commenters confirm Cablevision's conclusion that implementation of a beneficial IP-to-IP interconnection requirement does not require the Commission to adopt any new rules.[32/] The language of section 251 is technology neutral and nothing in the statute limits application of the interconnection obligations contained there to only circuit-switched TDM voice traffic.[33/] Explicit clarification that existing rules include a right to IP-to-IP interconnection would not, therefore, be a new rule, but rather the application of the basic pro-competitive framework of the Telecommunications Act of 1996 to the technology used by modern communications networks.

ILECs are required by section 251(c)(2) of the Communications Act to provide interconnection for "any requesting telecommunications carrier . . . at any technically feasible

---

31/ Verizon Comments at 17.

32/ *See* note 17, *supra*. While the RBOCs each urge that the Commission allow market forces to govern development of IP-to-IP interconnection, *see* Part II, *supra*, none suggest that there is any statutory impediment to Commission clarification that IP-to-IP interconnection is governed by sections 251 and 252, *see* note 25, *supra*.

33/ *See* COMPTEL Comments at 5-6 (noting that the Commission has, in a 2007 order, "already determined that Section 251 entitles telecommunications carriers to interconnect for the purpose of exchanging VoIP traffic with incumbent LECs") (citing *Time-Warner Cable Request for Declaratory Ruling that Competitive Local Exchange Carriers May Obtain Interconnection Under Section 251 of the Communications Act of 1934, as Amended, to Provide Wholesale Telecommunications Services to VoIP Providers*, Memorandum Opinion and Order, 22 FCC Rcd 3513, ¶¶ 8, 13 (2007)).

point within the [ILEC's] network."[34/] Under Commission-adopted definitions of technical feasibility, IP-to-IP interconnection is clearly technically feasible.[35/] As several comments note, the Commission has held that a form of interconnection (such as IP-to-IP interconnection) may be "technically feasible" even if the incumbent is not currently using it, and even if the incumbent LEC must incur some additional cost in order to provide it.[36/] Likewise, the Commission has previously interpreted section 251(c)(2)'s "technical feasibility" requirement to mean that the ILEC "must accept the novel use of, and modification to, its network facilities to accommodate the interconnector" because "Congress intended to obligate the incumbent [LEC] to accommodate the new entrant's network architecture."[37/] As explained herein, this requirement clearly applies to IP-to-IP interconnection.[38/]

Commenters are correct in noting that use by any ILEC of IP-to-IP interconnection methods in its own network is self-evident substantiation that IP-to-IP interconnection is technically feasible for that ILEC and therefore required.[39/] Every ILEC is required by section 251(c)(2) to provide interconnection "that is at least equal in quality to that provided to itself or

---

34/ 47 U.S.C. § 251(c)(2). *See* Cablevision Comments at 8-9; EarthLink Comments at 4-6; PAETEC, et al. Comments at 5-8.

35/ Cablevision Comments at 8; PAETEC, et al. Comments at 5.

36/ EarthLink Comments at 4; PAETEC, et al. Comments at 5.

37/ *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, 11 FCC Rcd 15499 ¶ 202 (1996). *See also, id*. ¶ 206 ("[T]he Act does not permit incumbent LECs to deny interconnection . . . for any reason other than a showing that it is not technically feasible.").

38/ *See also* Cablevision Comments at 8-10.

39/ Cablevision Comments at 8-9; EarthLink Comments at 5; PAETEC, et al. Comments at 6-7 ("If an incumbent LEC uses SIP, ATM or other IP-to-IP interconnection methods in its network, then such method is demonstrably technically feasible and becomes a mandatory method and form of interconnection under the Commission's rules and the Act.")

any subsidiary [or] affiliate."[40/] AT&T, CenturyLink, and Verizon, for example, each maintain significant and growing VoIP offerings and currently provide IP-to-IP interconnection internally or to subsidiaries or affiliates.[41/] Such ILECs cannot reasonably maintain that IP-to-IP interconnection is not technically feasible for them. Indeed, no ILEC suggested in its comments that IP-to-IP interconnection is not technically feasible.

But even an ILEC that may not be using IP-to-IP interconnection methods internally is not absolved of its statutory duty to interconnect at any technically feasible point unless it can demonstrate some "technical or operational concerns that prevent the fulfillment of a request by a telecommunications carrier for such interconnection."[42/] The widespread availability of IP network equipment means that it would be exceedingly difficult for any ILEC to show that it is actually *prevented* from providing an IP interconnection.[43/] Commission rules have also already determined that "[t]he fact that an incumbent LEC must modify its facilities or equipment to respond to [an interconnection] request does not determine whether satisfying such [a] request is technically feasible."[44/]

Because IP-to-IP interconnection is technically feasible, and because section 251 already requires ILECs to interconnect where technically feasible, IP-to-IP interconnection is already a required obligation for ILECs. The Commission's clarification of this existing obligation will finally force recalcitrant ILECs to engage in good faith negotiations to bring the benefits of IP-

---

40/ 47 U.S.C. § 251(c)(2). Certain rural ILECs may assert an exemption from section 251(c) requirements under section 251(f).

41/ COMPTEL Comments at 7.

42/ 47 C.F.R. § 51.5.

43/ EarthLink Comments at 6; PAETEC, et al. Comments at 6-7.

44/ 47 C.F.R. § 51.5.

to-IP interconnection more broadly to the public and encourage wider adoption of IP networks.[45/]

CONCLUSION

Other than the three remaining Regional Bell Operating Companies, there is significant agreement among commenters that the right for providers to obtain IP-to-IP interconnection from an ILEC is required by existing statute and that clarification of that right by the Commission will promote efficient use of networks and eliminate disincentives to adoption of new technology. RBOC pleas to leave IP-to-IP interconnection to the vagaries of the marketplace are contradicted by the fact that the market has to date failed to lead ILECs to provide IP-to-IP interconnection, despite the fact that it is clearly technically feasible. In its order resulting from this proceeding, the Commission should clarify that IP-to-IP interconnection is required by section 251 and the FCC's longstanding interpretations of the Act.

Respectfully submitted,

/s/ Howard J. Symons

Howard J. Symons
Kemal Hawa
Ernest C. Cooper
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
701 Pennsylvania Avenue, N.W.
Suite 900
Washington, D.C. 20004
(202) 434-7300
hsymons@mintz.com

Samuel L. Feder
JENNER & BLOCK LLP
1099 New York Ave., NW
Suite 900
Washington, D.C. 20001
(202) 639-600

Michael E. Olsen
Vice President,
Legal and Regulatory Affairs
Elana Shapochnikov
Senior Regulatory Counsel
Cablevision Systems Corp.
1111 Stewart Avenue
Bethpage, NY 11714
(516) 803-2300

May 23, 2011

45/ *See* Part I, *supra*.

EXHIBIT G

Before the
Federal Communications Commission
Washington, DC 20554

In the matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
Establishing Just and Reasonable Rates for Local Exchange Carriers	)	WC Docket No. 07-135
	)	
High Cost Universal Service Support	)	WC Docket No. 05-337
	)	
Developing a Unified Intercarrier Compensation Regime	)	CC Docket No. 01-92
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	
Lifeline and Link-Up	)	WC Docket No. 03-109
	)	

Reply Comments of Cox Communications, Inc. on Sections XVII.L-R

Barry J. Ohlson
Grace Koh
Cox Enterprises, Inc.
975 F Street, NW
Washington, D.C. 20004

J.G. Harrington
Derek H. Teslik
Dow Lohnes PLLC
1200 New Hampshire Avenue, NW
Washington, D.C. 20036

Jennifer Hightower
Cox Communications, Inc.
1400 Lake Hearn Drive
Atlanta, Georgia 30319

March 30, 2012

SUMMARY

Cox supports the Commission's continuing efforts to address intercarrier compensation and interconnection issues as the transition to Internet Protocol ("IP") interconnection proceeds.

IP Interconnection. As a competitive voice service provider, Cox relies on its rights under Sections 251 and 252 of the Communications Act, and will continue to need those rights during the transition to IP interconnection. To that end, the Commission should follow its own precedent, which applies Sections 251 and 252 to interconnection between competitive carriers and incumbents regardless of the regulatory classification of the service provided to the end user and regardless of the technology used. While technology changes, the rights and obligations created by Section 251 and 252 do not. The Commission, therefore, should reject arguments from commenters that ask it to ignore the law.

The Commission also should be skeptical of claims that IP interconnection can be accomplished without oversight. The history of interconnection between incumbents and competitors and the resistance of incumbent LECs to providing interconnection on fair and reasonable terms and conditions, combined with their continued market power in voice telephone service, demonstrate that IP interconnection requirements are necessary to promote competition and investment in IP networks.

As a practical matter, attempting to create a new regulatory model for interconnection would lead to delays in the introduction of new voice services, harming both customers and service providers. Instead, the Commission should adapt the rules to take advantage of the benefits of IP interconnection, such as reducing the number of

required points of interconnection. The Commission should not adopt a specific sunset for traditional interconnection until it can be confident the transition to IP interconnection is nearly complete.

The Commission also need not extend interconnection rights to over-the-top voice over IP services. These services are not covered by Sections 251 and 252 and already receive interconnection through certificated carriers that have Section 251 and 252 rights.

Transit. Transit is a critical means of indirect interconnection. Incumbents are required to make transit available as a form of interconnection under Section 251(c), as multiple courts and state regulators have determined. As a form of Section 251(c) interconnection, transit must be made available at cost-based rates.

Arguments claiming that Section 251(c) transit is unnecessary are incorrect. Even the largest competitive transit provider does not reach most of the carriers in the country, which leaves incumbent LECs as the only indispensible link to all other carriers. The lack of a competitive market is confirmed by the above-cost prices that incumbent LECs attempt to charge for transit. Transit obligations also must be technologically neutral, and applicable to both TDM and IP interconnection.

Originating Access and 8YY Access. The Commission should ensure that all carriers are subject to symmetrical treatment for originating access. Originating access, unlike terminating access, is subject to competitive pressures, and there is no need to reduce originating access to bill and keep. While 8YY access does not have the same characteristics as originating access, there is no economic or policy reason why carriers whose customers dial 8YY calls should be required to bear the burden of those calls, to the sole benefit of interexchange carriers and their customers.

If the Commission does adopt originating access rules, it should use the same timeline for the transition as it adopted for terminating access. This will ensure that the transition is completed in a timely fashion, will reduce administrative complexity, and will help eliminate arbitrage opportunities.

Finally, if originating access is reduced or eliminated, the Commission should adopt a recovery mechanism to permit carriers to recoup lost revenues. This mechanism should operate in the same way as the access recovery charge. The Commission should not permit incumbent carriers to recover lost originating access revenues from the Connect America Fund, as doing so would limit the funds available for broadband service and give incumbents an unwarranted competitive advantage.

TABLE OF CONTENTS

Before the
Federal Communications Commission
Washington, DC 20554

In the matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
Establishing Just and Reasonable Rates for Local Exchange Carriers	)	WC Docket No. 07-135
	)	
High Cost Universal Service Support	)	WC Docket No. 05-337
	)	
Developing a Unified Intercarrier Compensation Regime	)	CC Docket No. 01-92
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	
Lifeline and Link-Up	)	WC Docket No. 03-109
	)	

Reply Comments of Cox Communications, Inc. on Sections XVII.L-R

Cox Communications, Inc. ("Cox"), by its attorneys, hereby submits its reply comments on the intercarrier compensation and interconnection issues in the above-referenced proceeding.[1]

I. Introduction

Cox supports the Commission's ongoing efforts to address intercarrier compensation and interconnection issues as the telecommunications industry transitions to the Internet Protocol ("IP") formatted interconnection of voice services. As a long-time provider of competitive voice services, Cox has continuously invested in bringing the benefits of technological advances to its customers, including the introduction of

[1] Connect America Fund, *Report and Order and Further Notice of Proposed Rulemaking*, WC Docket No. 10-90 *et al.*, FCC 11-161 (rel. Nov. 18, 2011) (the *"Further Notice"*).

voice over IP technology.[2] In making these investments, Cox, has relied – and continues to rely – on the interconnection rights afforded by the Communications Act of 1934, as amended (the "Act") so that it can provide the highest quality voice service possible to its customers. Cox thus strongly agrees with those commenters that urge the Commission to recognize that the interconnection obligations created by the Act apply to incumbent local exchange carriers ("ILECs") regardless of the underlying technology used to interconnect.

To ensure interconnection rights remain intact, Cox urges the Commission to adhere to its precedent that already provides full Section 251 and 252 rights and obligations for interconnection between competitive carriers and incumbents regardless of the regulatory classification of the service provided to the end user.[3] Similarly, the Commission should reject arguments of commenters, such as Verizon and AT&T, that ask the agency to ignore the law and undo years of careful rulemaking, based on the introduction of a new technology that may be used for interconnection. Technology has changed, but ILEC control of the bottlenecks in the Public Switched Telephone Network ("PSTN") has not changed. Just as importantly, the basic interconnection rights and obligations under the Act have not changed.

While some adaptations of the rules to account for specific differences between Time Division Multiplexing ("TDM") and IP interconnection may be appropriate, they should be limited and focused on taking advantage of the inherent benefits of IP interconnection – such as the need for fewer points of interconnection than in today's

[2] Cox began offering telephone service using circuit-switched technology in 1997 and voice over IP technology in 2003. Today, Cox offers telephone service using both technologies.
[3] *See* Comments of Time Warner Cable at 6-10.

circuit-switched networks – while still ensuring that IP interconnection is available on reasonable terms and conditions.

With respect to intercarrier compensation, Cox asks the Commission to retain a symmetrical approach to treatment of originating access, both with respect to the charges that apply to traffic and the schedule for reducing originating rates. Though, for 8YY traffic, the Commission should tailor its rules to the characteristics and market of those unique services and create a reasonable transition that is predictable and reduces arbitrage opportunities. Part of that transition should include an access recovery mechanism that addresses reductions in originating access and 8YY revenues, but that does not put additional strain on the Connect America Fund.

II. The Commission Should Adopt Rules for IP-based Interconnection that Continue to Promote Competition and Investment in Broadband Networks.

The Commission can and should adopt rules that encourage providers to adopt IP-based technology when it is economically rational.[4] Interconnection rights prevent incumbents from exercising their leverage to unduly limit or extract unfair terms for interconnection, thus stymying competition and ultimately harming consumers. As a bar against anti-competitive conduct, interconnection rights are even more vital as the industry transitions to IP-based networks, and it is critical that the Commission confirm those rights and obligations to promote the continued deployment to more efficient IP-based voice services.

The Commission should reject arguments that attempt to obfuscate the FCC's clear authority to regulate IP interconnection for the provision of telephone exchange service and exchange access service. Incumbents like Verizon and AT&T improperly

[4] *Further Notice*, ¶ 1335.

argue that a change in technology in the network justifies permitting them to escape their interconnection obligations and repealing interconnection rights for carriers that have implemented IP technology.[5] And despite fatalistic warnings, there is no risk that applying the Act to IP voice interconnection would affect regulation of peering or other Internet arrangements now or in the future.

The Act clearly defines the scope of the Section 251 and 252 interconnection rights. A number of commenters correctly note that Sections 251 and 252 already provide for such interconnection rights because the requirements of those sections are technology neutral and do not depend on the type or classification of end user service that is supported by the interconnection.[6] Competitive local exchange carriers ("CLECs") such as Cox and other cable providers generally invoke Section 251 and 252 rights to provide managed interconnected voice over IP services.[7] The legal right to interconnection arises when, as the Commission has ruled repeatedly, a CLEC is requesting interconnection under Section 251(c)(2) for the purpose of providing telephone exchange or exchange access service. The policy imperative arises because CLECs that provide managed services require interconnection rights to provide high quality service and access necessary network functions to provide telephone exchange service and exchange access.

[5] *See, e.g.*, Comments of Verizon and Verizon Wireless at 6-39; Comments of AT&T at 9-50.
[6] *See, e.g.*, Comments of National Cable & Telecommunications Association at 6.
[7] For purposes of these comments, Cox defines "managed IP voice service" as a service that transmits voice and equivalent content over dedicated facilities, that routes and addresses calls using standard NANP numbers and that interconnects with the public switched telephone network, either directly or through an interconnection provider. Services that route traffic via the Internet are not managed IP voice services.

A. IP Interconnection Requirements are Necessary to Ensure Quality of Service and Access to Critical Features of the PSTN.

AT&T's and Verizon's arguments against Commission oversight of IP interconnection ignore fundamental differences between the ILEC-controlled architecture of the interconnected PSTN network and the Internet. Specifically, they fail to recognize that the best-efforts Internet model of exchanging traffic cannot guarantee two essential requirements of managed voice over IP traffic: quality of service and access to ILEC-controlled features such as 911 facilities, numbering resources, and routing. These are highly practical reasons for maintaining the Commission's pro-competitive and pro-investment policy of ensuring that CLECs have access to ILEC facilities via interconnection rights.

Access to ILEC-Controlled Essential Inputs. Today, incumbent local exchange carriers still control bottleneck facilities – the choke points of the telephone network – that give them the ability and incentive to discriminate against their competitors. This is not just a matter of connections to local telephone customers, but also includes access to emergency facilities, number portability and a host of other elements of voice telephone service.[8] All CLECs interconnecting in IP will continue to require access to the same essential inputs as when they interconnect in TDM.[9]

[8] While some incumbents argue that the bottleneck does not exist because they are not dominant in voice over IP services, this claim relies entirely on an artificial distinction between voice services provided via TDM and voice services provided via IP. *See* Comments of CenturyLink at 51. AT&T claims that cable operators have some form of market power in high speed Internet service because of their economies of scale. Comments of AT&T at 4. Even if this claim were correct (which it is not), it has nothing to do with managed voice service, where incumbents still maintain their dominance, and there is no evidence that cable operators could leverage their position in the Internet market to obtain favorable terms for IP voice interconnection. In addition, AT&T's arguments are focused on over-the-top services like Skype and Vonage, and do not address the significant quality of service issues that affect managed landline voice service, including the types of voice service provided by cable operators.

[9] Indeed, in Cox's case, it offers both types of services simultaneously in many markets, without distinguishing between the technologies.

Applying Sections 251 and 252 to IP interconnection by CLECs to support managed interconnected voice over IP services is appropriate because those services route calls to and from the PSTN to specific carriers using North American Numbering Plan ("NANP") resources, specifically telephone numbers as determined by the Local Exchange Routing Guide (the "LERG") and location routing numbers in the Number Portability Administration Center ("NPAC") database. These mechanisms will be necessary for as long as traffic continues to flow on and off the PSTN, as there is no reliable alternative to either the LERG or the NPAC database, and they work only via standard interconnection. AT&T does not address numbering issues under its Internet model for exchanging traffic, even while acknowledging that ENUM is not sufficiently advanced to substitute for the current numbering system.[10]

Applying Section 251 and 252 interconnection rights to requesting CLECs to support managed interconnected voice over IP services also is consistent with the broad approach the Commission has taken to these services over time, which has explicitly imposed on these services many of the obligations that apply to traditional voice service.[11] As Cox noted in its initial comments in the Commission's *IP-Enabled Services* proceeding, it is appropriate to balance rights and obligations under the rules, and interconnection rights under Sections 251 and 252 are an appropriate balance for the

[10] Comments of AT&T at 33. This is one reason that the Commission should not consider relying on ENUM as a way to ensure interconnection for IP-based services. ENUM remains in its infancy.
[11] *See, e.g.,* Universal Service Contribution Methodology, *Report and Order and Notice of Proposed Rulemaking,* 21 FCC Rcd 7518, 7544 (2006) (requiring universal service contributions), Telephone Number Requirements for IP-Enabled Services Providers, *Report and Order, Declaratory Ruling, Order on Remand and Notice of Proposed Rulemaking,* 22 FCC Rcd 19531 (requiring compliance with number portability requirements), IP-Enabled Services, 911 Requirements for IP-Enabled Service Providers, *First Report and Order and Further Notice of Proposed Rulemaking,* 20 FCC Rcd 10245 (2005) (requiring provision of E911).

obligations that the Commission has imposed on managed interconnected voice over IP providers.[12]

Inadequacy of the Internet Model for Exchanging Managed VoIP Traffic.

Comments by parties like AT&T misunderstand the nature of CLEC-supported managed voice over IP services.[13] AT&T's theory is that exchange of all IP traffic can be governed by commercial terms because Internet service providers have exchanged such data for more than 20 years and existing agreements will meet interconnection needs for managed voice over IP services.[14] While this approach might be suitable for "over-the-top" voice services that do not depend on maintaining the quality of service required by landline residential and business customers, it would be unacceptable for providers of managed, facilities-based services.[15] Managed, interconnected voice over IP service offers real time, full duplex communication that must maintain an expected, predictable and controllable level of service throughout the duration of the communication. This comparatively high level of service quality is best supported via the same types of interconnection – direct or transited – that are used for traditional voice service. These types of interconnection would implicitly limit the number of quality-degrading "hops" (i.e., intermediate exchanges) made during transmission of a call and therefore maximize service quality. AT&T acknowledges, in fact, that the needs of business customers are greater than the needs of customers using Skype or Vonage, yet fails to recognize that

[12] *See* Comments of Cox Communications, Inc., WC Docket No. 04-36 (filed May 28, 2004) at 9-16.
[13] Comments of AT&T at 10-16.
[14] *Id.* at 19-20. The agreements AT&T cites are for telepresence services, which do not have all of the characteristics of voice services, such as the need to route calls based on the North American Numbering Plan or the need to have access to E911. Equally important, the videoconferencing agreement plainly is mutually beneficial, and has no negative competitive implications for AT&T. AT&T and other incumbents would have completely different incentives in dealing with their voice service competitors.
[15] Verizon also appears to be focusing on over-the-top providers. *See* Comments of Verizon at 11 (describing video conferencing services offered via the Internet).

those greater needs also require a higher standard for quality of service than the standard "best efforts" transmission via the Internet.[16]

Equally significant, AT&T's proposal seems to be based on the theory that current methods of exchanging Internet traffic, which it acknowledges are imperfect, will evolve on their own to a perfected state "in the long run" and as "the industry completes its shift to IP."[17] It does not explain how that would happen, or even why it is plausible to think it would. AT&T also does not explain how its approach could guarantee a quality of service for managed voice over IP traffic today, while, at the same time, admitting that the Internet model for exchanging traffic is inferior to existing TDM interconnection for maintaining data quality.[18] Without the assurance of quality of service, it is difficult to see why any carrier would choose to switch from TDM to IP for its managed voice service, unless it could be certain of obtaining IP interconnection.[19]

IP Interconnection Rights Necessary for Competition and Investment. There is no reason to expect incumbent carriers to offer ensure access to these essential inputs or quality of service on reasonable terms and conditions without the framework established under Sections 251 and 252. In fact, history suggests otherwise. For instance, when SBC offered its "TIPToP" tariff for IP interconnection, the terms under that tariff were considerably less favorable than the terms available to competitive carriers through

[16] *Compare* Comments of AT&T at 22 (needs of business customers), 18 (no quality of service standards in exchange of Internet traffic).
[17] *Id.* at 1, 4.
[18] *Id.* at 18-19 (acknowledging that common IP peering and transit arrangements do not provide quality of service or differential packet handling).
[19] In this regard, Verizon's comments are exactly backwards. Verizon argues that adopting regulations will retard IP interconnection. Comments of Verizon at 4. It is uncertainty that will impede adoption of IP interconnection, as carriers will not know what terms they can receive or how it will be implemented. A known regulatory regime will allow carriers to determine when it is economically beneficial to use IP for interconnection.

standard interconnection agreements.[20] This is significant because SBC argued at the time that the TIPToP tariff was sufficient to provide for interconnection for voice over IP providers, and that those providers did not need to have Section 251 and 252 rights.[21]

The likelihood of delays in negotiation and of incumbents offering unreasonable terms in the absence of the protections of Sections 251 and 252 only would slow the adoption of the IP technology across the country. Competitors would be reluctant to expend the time and effort necessary to obtain interconnection on unfavorable terms (or on terms less reasonable than TDM-based interconnection). Without the ability to seek arbitration, the assurance of the availability of TELRIC pricing, and reasonable terms for physical interconnection, transaction costs of obtaining IP interconnection would increase significantly and discourage managed voice over IP providers from seeking to obtain interconnection. Indeed, in the absence of the ability to obtain arbitration, there is a significant possibility that the introduction of new services would be delayed or disrupted if incumbent LECs and competitors are unable to reach agreement.

B. The Commission Has the Necessary Legal Basis to Enforce IP Interconnection Requirements Under Sections 251 and 252.

1. Current Law Supports IP Interconnection Requirements.

In addition to the practical policy reasons for confirming interconnection rights and obligations for IP networks, there is significant legal support. Cox strongly agrees with those commenters who argue that both the Act and Commission precedent support the FCC's legal authority to enforce interconnection rights with respect to IP

[20] *See, e.g., SBC TIPToP Service Slammed*,Vision 2 Mobile (Jan. 1, 2005) *at* http://www.vision2mobile.com/articles/2005/01/sbc-tiptop-service-slammed.aspx.
[21] *See* SBC Communications Inc., Tariff FCC No. 73, Transmittal No. 3019 (Nov. 24, 2004) at 1 (indicating purpose of tariff was to "connect traffic from [] IP end users to end users of the Public Switched Telephone Network").

interconnection.[22] Indeed, under Sections 251 and 252, the Commission can ensure continued interconnection rights for CLECs to support provision of voice services, regardless of the technology used in interconnection or the classification of service provided to the end user.[23]

The *Further Notice* recognizes that the interconnection provisions in the Act are technologically neutral.[24] Nothing in Section 251 or Section 252 requires that the service that is being interconnected be provided using TDM technology or prohibits applying those provisions to technologies other than TDM. In fact, this technology-agnostic approach is consistent with the practice when the Telecommunications Act of 1996 was adopted – providers interconnected using all technologies in place at the time, such as electrical interfaces, optical interfaces, landline and wireless.[25]

The same should be true for IP interconnection. Time Warner Cable has explained the importance of treating direct IP interconnection to incumbent carriers, by certificated carriers, in the same way as TDM interconnection. If a voice over IP provider holds state certification and operates as a common carrier, under Section 251 it

[22] *See, e.g.,* Comments of National Exchange Carrier Association, Inc., National Telecommunications Cooperative Association, Organization for the Promotion and Advancement of Small Telecommunications Companies and the Western Alliance at 38-40; Comments of Time Warner Cable at 6-8.
[23] It also is important for the Commission to ensure that CLECs that currently are interconnecting with incumbent LECs maintain those rights going forward, regardless of the form of interconnection used or the retail service provided to end users. Given that thousands of interconnection agreements are in place and that tens of millions of customers are served via existing interconnection arrangements, disrupting those arrangements would make no economic sense.
[24] *Further Notice*, ¶ 1342 ("[W]e observe that section 251 of the Act is one of the key provisions specifying interconnection requirements, and that its interconnection requirements are technology neutral – they do not vary based on whether one or both of the interconnecting providers is using TDM, IP, or another technology in their underlying networks.").
[25] The *Local Competition Order* specifies that both landline competitors and wireless providers are entitled to interconnection under Sections 251 and 252. Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, *First Report and Order,* 11 FCC Rcd 15499, 15998-9 (1996) ("*Local Competition Order"*).

"is entitled to interconnect in its own right."[26] Once a carrier has interconnection rights, the specific technology used for interconnection does not matter. Further, it would, as Time Warner Cable says "make[] little sense" to require carriers that have a right to interconnection to make unnecessary conversions between IP format and TDM format just to meet the unilateral demands of incumbent LECs.[27] Indeed, the entire point of Section 251(c)(2) is to prevent incumbent LECs from imposing their self-interested whims on competitive LECs.[28]

In its *North Carolina Interconnection Order,* the Commission determined that interconnection rights were available to a CLEC that sought interconnection for the purpose of originating and terminating calls that ultimately were transmitted via Internet Protocol.[29] In that case, the calls were being translated between Internet Protocol and TDM, but the basic principle applies just as well to calls that are interconnected in IP format without unnecessary translations. The *North Carolina Interconnection Order* is particularly important because it demonstrates the distinction between the retail service provided to the end user and the wholesale, carrier-to-carrier interaction required for interconnection.

2. Opposing Parties Incorrectly Interpret Existing Precedent.

Parties claiming that the Commission does not have the legal authority to require interconnection for voice over IP services misinterpret Commission precedent and the

[26] Comments of Time Warner Cable at 8.
[27] *Id.*
[28] *See Local Competition Order* at 15508 ("An incumbent LEC . . . has the ability to act on its incentive to discourage entry and robust competition . . . . Congress addressed these problems in the 1996 Act by mandating that the most significant economic impediments to efficient entry into the monopolized local market must be removed.").
[29] Time Warner Cable Request for Declaratory Ruling that Competitive Local Exchange Carriers May Obtain Interconnection Under Section 251 of the Communications Act of 1934, as Amended, to Provide Wholesale Telecommunications Services to VoIP Providers, *Memorandum Opinion and Order,* 22 FCC Rcd 3513, 3517 (2007) (the *"North Carolina Interconnection Order"*).

law. For instance, AT&T argues that the Commission's *Vonage* decision precludes the applicability of Section 251 because that order determined that voice over IP service was jurisdictionally interstate.[30] The Commission did not, however, determine either that the Vonage service at issue in that case was a long distance service or that all voice over IP service was jurisdictionally interstate.[31] In fact, since the *Vonage* decision, the Commission specifically has recognized that voice over IP service can have an intrastate component.[32]

Additionally, Verizon argues that voice over IP services are information services and therefore not entitled to interconnection rights.[33] Even if the Commission were to classify retail voice over IP services as information services, the Commission still would have the ancillary jurisdiction authority to require interconnection by incumbent LECs under Sections 201 and 202 of the Act, could invoke its ancillary jurisdiction under Section 4(i) of the Act, and could reasonably conclude that interconnection was required for the telecommunications component of the underlying service.[34] Most importantly, Verizon conveniently ignores the key determination in the *North Carolina Interconnection Order* that providers are entitled to interconnection at the wholesale, carrier-to-carrier level, regardless of the nature of the retail service provided to end

[30] Comments of AT&T at 38.
[31] Memorandum Opinion and Order, *Vonage Holdings Corporation Petition for a Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, 19 FCC Rcd 22404 (2004), *aff'd Minn. PUC v. FCC*, 483 F.3d 570 (8th Cir. 2007).
[32] Universal Service Contribution Methodology, *Report and Order and Notice of Proposed Rulemaking*, 21 FCC Rcd 7518, 7544 (2006) (noting that voice over IP providers that can determine the portion of their traffic that is intrastate in nature may use actual data for universal service reporting purposes); Universal Service Contribution Methodology, *Declaratory Ruling*, 25 FCC Rcd 15651 (permitting states to recover universal service contributions from nomadic interconnected voice over IP providers).
[33] Comments of Verizon at 27-29.
[34] Cox has addressed jurisdictional issues relating to voice over IP interconnection at length in earlier filings. *See* Cox IP-Enabled Services Comments at 22-26.

users.[35] AT&T's argument that the Commission has determined that voice over IP services are information services appears to be based entirely on one of AT&T's own pleadings.[36] The Commission most assuredly has *not* decided that issue, as is evidenced by any one of a number of orders released in the last ten years, including the order that includes the *Further Notice*.[37]

What AT&T and Verizon really are saying with these arguments is that they no longer, and one could argue never did, want to interconnect on reasonable terms and conditions with competitive providers of any kind. This is most evident in AT&T's argument that the Commission's *North Carolina Interconnection Order* would not permit a certificated carrier that also offered voice over IP service to obtain interconnection for that service.[38] As an initial matter, that claim is entirely unsupported by the order itself, which says that a certificated CLEC that requests interconnection for the purpose of transmitting calls from voice over IP customers is entitled to that interconnection.[39] Even if the order was unclear on that point, the identity of the provider of retail voice over IP is irrelevant. A certificated CLEC has consistently been found to be entitled to interconnection as a right under Section 251 for transmission of local traffic. Under Section 251, it does not matter who the underlying customer is or what technology is used to provide that customer with managed voice service.

Finally, applying Sections 251 and 252 to IP interconnection by CLECs providing managed interconnected voice over IP services does not require applying those provisions to data exchanged over the public Internet. The Commission already has

[35] *North Carolina Interconnection Order*, 22 FCC Rcd at 3517.
[36] Comments of AT&T at 38.
[37] *Further Notice*, ¶ 954.
[38] Comments of AT&T at 38.
[39] *North Carolina Interconnection Order*, 22 FCC Rcd at 3517.

distinguished between managed interconnected voice over IP service and Internet traffic in its *Network Neutrality Order,* which specifically determined that the new rules would not be applied to managed services, including managed voice over IP, because they were provided separately from standard Internet access.[40]

Accordingly, the Commission need not expand the present scope of interconnection rights to parties other than the CLECs that presently have such rights because such an expansion would not be covered by Sections 251 and 252. As other commenters have recognized, other services, such as data and video exchanged over the Internet, over-the-top voice over IP and non-interconnected voice over IP, should not be included in the interconnection regime.[41]

C. The Commission Should Adopt a Specific Framework for IP Interconnection for CLECs.

In support of its finding that Sections 251 and 252 apply to IP-based traffic exchange and interconnection, the Commission could facilitate the transition to IP technology by adopting a few specific concepts to govern those aspects of IP interconnection that are not addressed in the current TDM interconnection environment. The Commission also should ensure that TDM interconnection remains available to companies that have not yet made the conversion to IP interconnection.

Notification Process. The Commission should require, under the network modification provisions of Section 251(c)(5), that any incumbent LEC that intends to offer IP interconnection notify all carriers interconnected via TDM facilities six months prior to the time the IP facilities become available. This will allow sufficient time for

[40] Preserving the Open Internet, *Report and Order,* 25 FCC Rcd 17905, 17965 (2010) (the "*Network Neutrality Order"*).
[41] *See, e.g.*, Comments of Comcast at 28 (noting that there is no need to intervene in commercial Internet backbone arrangements).

carriers that wish to convert to IP interconnection to make appropriate interconnection requests, negotiate or arbitrate terms and conditions for IP interconnection under the Section 252 framework, and prepare their facilities for interconnection.

Cox submits that this notification approach is more reasonable than adopting rules that require IP interconnection to be made available at a specific time. Allowing carriers to set their own timetables for IP interconnection will ensure that the conversion occurs when it is reasonable and cost effective. It is better for individual carriers to base their decisions on their own economic considerations, available technology, engineering requirements and service issues than to be subject to a one-size-fits-all cutover date.

No Phase Out of TDM Interconnection. The Commission's rules should specify that TDM-based interconnection should be available from an incumbent LEC as carriers transition to IP technology. The Commission should not set any deadline for using IP interconnection until it is apparent that the transition is nearly complete. Setting a deadline today would mean making an arbitrary universal determination about when it will be economically reasonable for each carrier to complete the conversion, even though the process has not really begun.[42] Permitting incumbents to require conversion would prevent competitive carriers from exercising their reasonable economic judgment. Moreover, not setting a deadline eliminates any need for the Commission to mandate cost recovery for IP-to-TDM conversion, as no carrier will be forced to convert traffic at any specific time.[43]

[42] The Commission could, of course, decide at some later date to impose a conversion deadline after nearly all carriers already have converted, similar to the deadline it imposed for elimination of analog cellular service, which was not set until digital technology had become prevalent in wireless services. *See* Year 2000 Biennial Review – Amendment of Part 22 of the Commission's Rules to Modify or Eliminate Outdated Rules Affecting the Cellular Radiotelephone Service and Other Commercial Mobile Radio Services, *Report and Order*, 17 FCC Rcd 18401 (2002).
[43] *Further Notice*, ¶ 1361.

Consistent with the requirement to maintain existing TDM-based interconnection, Cox agrees with the comments of Cbeyond and other competitive carriers that the Commission should not adopt any of the network edge proposals in this proceeding.[44] These proposals would shift the burden of bearing the costs of interconnection to competitors, with no benefit to competition or the marketplace. Rather than adopting these proposals, the Commission should retain the current rules governing how costs of interconnection are to be allocated.[45]

No Mandatory Points of Interconnection. The Commission should not mandate any set number of, or location for, IP-IP points of interconnection. It is, however, reasonable to require that an incumbent LEC permit IP interconnection at any point where it already permits IP interconnection, as is the case for TDM interconnection. This requirement will prevent discrimination by incumbents against specific competitors.

It also would be acceptable for the Commission to adopt the Sprint/T-Mobile proposal, as a fallback requirement, to mandate at least a single point for IP interconnection per state, so long as the point of interconnection is at a carrier-neutral collocation site, and not at a site of the incumbent's choosing.[46] Such a requirement would be analogous to, but more efficient than, the Commission's existing requirement for at least one point of interconnection per LATA.[47] Even with such a requirement in place, mutually-agreed additional points of interconnection should be permitted.

---

[44] *See* Comments of CBeyond *et al.* at 15-16.
[45] 47 C.F.R. § 51.703(b); *see also TSR Wireless, LLC v. U S West Communications, Inc.*, Memorandum Opinion and Order, 15 FCC Rcd 11166 (2000) (carriers must pay costs for transport to points of interconnection), *aff'd sub. nom. Qwest Corp. v. FCC*, 252 F.3d 462 (D.C. Cir. 2001).
[46] *See* Comments of T-Mobile at 13.
[47] *See, e.g.*, Connect America Fund, *Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking*, 26 FCC Rcd 4554, 4775 & n. 1088 (2011).

III. Transit Remains Critical to Ensure Reasonable Indirect Interconnection Is Available.

The *Further Notice* seeks additional comment on issues relating to transit as a means of indirect interconnection.[48] As Cox has described to the Commission previously, transit remains an essential element of indirect interconnection, and incumbents are required to make transit available under Section 251(c).[49] The suggestion that transit should be unregulated is baseless and should be rejected.[50] Rather, as several carriers suggested, the Commission should require transit to be made available at cost-based rates.[51]

Most importantly, and contrary to the suggestion of Neutral Tandem, transit remains essential because it is the only mechanism for indirect interconnection in many cases as even the most successful competitive transit provider does not reach most of the carriers in the country.[52] The only carriers that do in fact interconnect with all other carriers in their local calling areas are the incumbents, and thus they form an indispensible link to every other carrier.

The lack of a competitive alternative is further confirmed by the prices that carriers seek to charge for transit. As Cox has explained, incumbents across the country

[48] *Further Notice*, ¶ 1313.
[49] *See* Comments of Cox Communications, Inc., WC Docket 10-90, *et al.*, filed Aug. 24, 2011, at 14-15 ("Cox August 24 Comments"), Letter from J.G. Harrington, Counsel to Cox Communications, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 10-90, 07-135, 05-337, GN Docket No. 09-51, CC Docket Nos. 01-92, 96-45, at 1-2, 4 (filed Oct. 19, 2011), Letter from J.G. Harrington, Counsel to Cox Communications, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 10-90, 07-135, 05-337, GN Docket No. 09-51, CC Docket Nos. 01-92, 96-45, at 1-3 (filed Oct. 21, 2011).
[50] *See* Comments of Neutral Tandem dba Intelliquent.
[51] *See* Comments of Cbeyond, et al. at 11-14.
[52] Neutral Tandem has told the Commission that it connects with "more than 100" of the largest carriers in the United States, but there are thousands of interconnected local voice service providers. Letter from Russell Blau, Counsel to Neutral Tandem, to Marlene H. Dortch, Secretary, FCC, WC Docket 10-90 *et al.* (filed Oct. 4, 2011) (the "Blau Letter"), declaration of Gerard Laurain at 1-2. Cox notes that Neutral Tandem continues to rely on prior comments, without addressing this consideration, to claim that transit is competitive.

propose transit rates that are far in excess of cost, and certainly well above TELRIC rates.[53] If the market were competitive, incumbents would be constrained to offer cost-based rates. Thus, in the absence of regulation, transit will be available only at supra-competitive rates.[54]

In fact, regulation is mandated by Section 251(c) because transit is a form of interconnection under Section 251(c)(2). Cox previously described the reasons that transit must be treated as a form of interconnection in detail in its earlier comments in this proceeding.[55] The best statement on this issue comes from the U.S. District Court in Nebraska, which examined the question in 2008:

> When Section 251(a) is read in conjunction with Section 251(c), it is clear that Congress imposed this obligation in Section 251(c) of the Act. Under Section 251(c), an ILEC must allow a CLEC to interconnect its facilities and equipment with the ILEC's network "for the transmission and routing of telephone exchange service and exchange access." 47 U.S.C. § 251(c)(2)(A); 47 C.F.R. § 51.305(a). Accordingly, an ILEC must provide transit service when a CLEC interconnects with the ILEC for the purpose of indirectly interconnecting with a third carrier. Otherwise, the indirect interconnection could not be used "for the transmission and routing of telephone exchange service and exchange access," and an ILEC could frustrate the flow of traffic and prevent carriers from indirectly interconnecting. Such a finding would render the "indirectly" language in Section 251(a) meaningless. The clear language of Section 251 requires ILECs to directly interconnect with competitors and facilitate competitors' ability to indirectly interconnect.[56]

While one party has argued to the Commission that transit cannot be a form of interconnection because it involves transport,[57] that claim is refuted by the FCC's own decisions and by the Supreme Court's decision in *Talk America v. Michigan Bell*, which

[53] *See* Cox August 24 Comments at 14 (describing range of rates proposed by incumbent LEC in different states.
[54] Comcast also notes that incumbents may try to recoup some of their lost access revenues by increasing transit rates. Comments of Comcast at 8.
[55] *See* Cox August 24 Comments at 13-14.
[56] *Qwest v. Cox Nebraska Telecom*, 2008 WL 5273687 *6 (footnote omitted); *see also Southern New England Telephone v. Pelermino*, 2011 WL 1750224 *7 (citing *Qwest* with approval).
[57] *See* Blau Letter.

specifically held that entrance facilities are a form of interconnection.[58] Like transit, entrance facilities use transport (and typically significantly more transport than transit). If they are a form of interconnection, there is no reason to believe that transit is not.

Finally, any transit obligation must be technologically neutral. As described above, Sections 251 and 252 apply regardless of the technology used.[59] Thus, the transit obligation also applies to any technology used to transmit calls from one network to another. More specifically, if an incumbent makes IP interconnection available, it must offer transit over those interconnection facilities. This will be particularly important during the early evolution of IP interconnection, as smaller carriers may be reluctant to invest in interconnection facilities that are specific to other smaller carriers and as competitive alternatives will not be well developed.

IV. The Commission Should Adopt Rules for Originating Access and 8YY Access that Are Tailored to the Requirements and Marketplace Realities of Those Services.

A. In Reforming Originating Access, the FCC Should Consider the Differences Between Originating and Terminating Switched Access.

Whatever action the Commission ultimately takes regarding originating access, it should begin by continuing to ensure symmetrical treatment for all originating access, as Cox and others have urged the Commission to do in connection with pending petitions for reconsideration.[60] The Commission also must realize that there are fundamental differences between originating and terminating switched access. Unlike terminating

[58] *Talk America, Inc. v. Michigan Bell Co.,* 131 S.Ct. 2254 (2001) (noting that transport used in connection with entrance facilities does not disqualify use of such facilities as interconnection).
[59] *See supra* Section II.B.1.
[60] *See, e.g.,* Letter from J.G. Harrington, Counsel to Cox, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 *et al.,* Mar. 16, 2012 (discussing reasons to maintain equal treatment for incumbents and voice over IP providers in originating access pricing), Letter from A. Richard Metzger, Jr., Counsel to Comcast Corporation, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 *et al.*, Mar. 8, 2012 (same), Letter from Jennifer K. McKee, National Cable & Telecommunications Association, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 *et al.,* Mar. 16, 2012 (same).

switched access, where the LEC has the retail relationship and revenue opportunity with the end user, with originating access that opportunity sits entirely with the IXC (or LEC-affiliated IXC), who is billing the end user for its service. For this reason, as long as equal access and stand-alone long distance service remain available, there is no reason to reduce originating access charges to bill and keep.[61]

8YY access presents different issues than originating access. For instance, LEC end user customers dialing 8YY calls do not pay for the call but *unknowingly* select the IXC network responsible for transporting and terminating the traffic; that IXC pays the dialer's LEC for access. Also, toll-free service remains a significant commercial business opportunity. Ultimately, there is no economic or policy reason that LECs whose customers dial 8YY calls to other providers should be required to lower originating 8YY access rates solely for the benefit of interexchange carriers and their customers.[62]

B. If the FCC Does Transition Originating Access to a Bill and Keep Regime, Any Transition Should Use the Same Timeline as for Terminating Switched Access.

The Commission has stated its desire to transition all intercarrier compensation rates to bill and keep.[63] If the Commission ultimately adopts that approach for originating access services, it should adopt a transition timeline that has the same

[61] Comments of the Rural Carrier Associations at 13 (noting that equal access in a bill-and-keep environment requires the LEC to provide a service solely for the benefit of the IXC, without payment; Comments of Moss Adams, LLP *et al.* at 5 (explaining that imposing bill and keep for originating access would not assess costs on the toll provider to which the ILEC is providing service and thus is improper); Comments of CenturyLink at 7-10 (describing distinct attributes of originating access that weigh against bill and keep compensation).

[62] Comments of Comcast at 6 (shifting to bill and keep for 8YY traffic will raise novel legal and policy questions because the end user of the originating service provider is not the customer of the 8YY service.); Comments of HyperCube at 14-16 (Commission should take no action now to eliminate originating access charges, because the marketplace can be expected to address them adequately.).

[63] *Further Notice*, ¶ 736.

endpoints as the timeline for terminating access. Indeed, as Comcast suggests, a national, uniform transition is critical.[64]

There are several reasons to adopt a parallel timeline. First, once the Commission determines that the end state should be bill and keep, there is no reason to have a transition that is any longer than necessary. The timeline adopted for terminating access effectively sets the shortest practical period for the transition, as it would be unreasonable to expect to bring originating access rates to zero any faster or slower than terminating access rates.

Second, adopting the same end date is administratively simpler for all carriers. It allows them to modify their billings systems and other back office operations on a unified schedule, rather than eliminating one charge and then another after varying transitions.[65] A unified end date will simplify other forms of planning as well.

Third, adopting the same timeline will help to limit potential arbitrage opportunities that might arise from eliminating terminating access charges at a different time than originating access charges. While it may not appear obvious what arbitrage opportunities would exist, experience shows that carriers will find those opportunities wherever they occur. Arbitrage occurred with reciprocal compensation and ISP-bound traffic; it happened with access stimulation; and it happened with phantom traffic. The Commission should expect that having different end dates for the transition to bill and keep for terminating and originating access will create an arbitrage opportunity that some carriers will seek to exploit.

[64] Comments of Comcast at 5-6.
[65] Comments of Moss Adams, LLP *et al.* at 6 (If transition begins immediately, it should mirror terminating access so that administrative and tariffing burdens are minimized.)

C. The Commission Should Adopt a Recovery Mechanism for Revenues Lost as a Result of Reductions in Originating Access Charges.

In the order portion of the *Further Notice*, the Commission adopted a recovery mechanism to permit carriers to recoup lost terminating access revenues through flat charges on end users.[66] The Commission stated that this mechanism was necessary to prevent undue revenue losses over the transition to bill and keep for terminating access. It also adopted safeguards to prevent carriers from recovering more revenue than necessary. Cox now urges the Commission to adopt a similar recovery mechanism to moderate the impact of reductions in *originating* access and to limit access to the mechanism to those carriers that actually lose revenues from originating access reductions.

To accomplish a viable recovery mechanism for originating access losses, the Commission should allow local exchange carriers to impose a flat fee charge on any customers who choose long distance providers other than their local exchange carriers. Like the access recovery charge, this fee should be imposed on a per-line basis and should be graduated, increasing as maximum originating access charges decline. It is inappropriate to permit this charge to be imposed on customers who purchase long distance service from their local carriers because originating access costs already are being recovered in the retail rates paid by those customers.[67]

Similarly, given the unique nature of the 8YY service noted above, if the Commission chooses to reduce 8YY access charges, local exchange carriers should be

[66] *Further Notice*, ¶¶ 847-923.
[67] Cox notes that, for this reason, it is not discriminatory to impose the fee only on customers who purchase long distance service from other carriers – the local carrier will recovers its costs either through its retail rates or through the charge, but in either case it will recover those costs from every local telephone customer.

permitted to recover their costs for providing those services as well. Since the cost-causing customer is the one that purchases 8YY service, in this case the fee should not be imposed on the local exchange carrier's customers. Instead, it should be paid by the long distance carriers that transmit 8YY calls, either as a flat per-call fee or by enhancing existing fees for 8YY database queries.

Notwithstanding the above suggestions, the Commission should not, however, permit carriers to recover lost originating access revenues from the Connect America Fund.[68] As the Commission has recognized, the size of the Connect America Fund should be limited, and the fund should be used to the maximum extent possible to support broadband service, not legacy voice service.[69] Designing the recovery mechanism so that customers pay the costs of access directly through an access recovery charge, rather than indirectly through the Connect America Fund, will send more efficient market signals and will be more equitable for both carriers and consumers.

[68] Comments of Time Warner Cable at 19-20 (stating the Commission should not make funding available through its newly established recovery mechanism to offset reductions in originating access rates); Comments of Cbeyond, *et al.* at 8-9 (arguing that if originating rates are reduced, ILECs should not be able to tap the currently envisioned access recovery fund for recovery).
[69] *Further Notice*, ¶ 18.

V. Conclusion

For all of these reasons, the Commission should adopt an order consistent with these reply comments.

Respectfully submitted,

COX COMMUNICATIONS, INC.

By: /s/

J.G. Harrington
Derek H. Teslik
Dow Lohnes PLLC
1200 New Hampshire Avenue, NW
Washington, D.C. 20036

Barry J. Ohlson
Grace Koh
Cox Enterprises, Inc.
975 F Street, NW
Washington, D.C. 20004

Jennifer Hightower
Cox Communications, Inc.
1400 Lake Hearn Drive
Atlanta, Georgia 30319

March 30, 2012

EXHIBIT H

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition	)	GN Docket No. 12-353

COMMENTS OF CABLEVISION SYSTEMS CORPORATION

Catherine Bohigian
Senior Vice President, Federal Affairs
Cablevision Systems Corp.
1099 New York Ave. NW Suite 675
Washington, DC 20001
(202) 393-0343

Samuel L. Feder
Luke C. Platzer
JENNER & BLOCK LLP
1099 New York Ave., NW Suite 900
Washington, D.C. 20001
(202) 639-6000

Howard J. Symons
MINTZ, LEVIN, COHN, FERRIS,
GLOVSKY AND POPEO, P.C.
701 Pennsylvania Ave., NW Suite 900
Washington, D.C. 20004
(202) 434-7300

January 28, 2013

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition	)	GN Docket No. 12-353

COMMENTS OF CABLEVISION SYSTEMS CORPORATION

Cablevision Systems Corporation ("Cablevision") hereby submits comments on AT&T's proposal for the Commission to conduct "trial runs" in which incumbent local exchange carriers ("ILECs") would convert circuit-switched facilities to Internet Protocol ("IP") facilities in particular wire centers.[1] As explained below, Cablevision supports AT&T's Petition with the important caveat that, even in such trial runs, the Commission should ensure that ILECs honor requests to provide interconnection for voice service in IP. FCC oversight of interconnection with ILECs remains necessary, regardless of the technology used, in order to ensure a competitive marketplace that promotes consumer choice and fosters investment in IP networks by all providers.

INTRODUCTION AND SUMMARY

Cablevision has long supported efforts to advance the transition of the nation's telephone network to IP technology. Cablevision entered the voice market as a competitive local exchange carrier ("CLEC") shortly after enactment of the Telecommunications Act of 1996 ("1996 Act"), providing circuit-switched services to residential and business customers. Since that time,

[1] *See* AT&T Petition to Launch a Proceeding Concerning the TDM-to-IP Transition, GN 12-353 (Nov. 7, 2012) ("AT&T Petition").

Cablevision has invested billions of dollars to construct a state-of-the-art fiber network that currently serves over three million subscribers in Cablevision's core service territory in the tri-state area of New York, New Jersey, and Connecticut, and thousands of additional subscribers in Colorado, Montana, and Wyoming. Cablevision uses this network to provide high-speed Internet service, video, and voice services to its customers. With respect to voice services, Cablevision has largely completed the IP transition and now provides most of its customers – and all of its residential customers – service using Voice over Internet Protocol ("VoIP"). Cablevision's investment in voice services and IP technology has enabled it to bring the benefits of competition to its customers in urban, suburban, and rural communities.

Notwithstanding Cablevision's investments in its IP network, ILECs continue to insist that it interconnect and exchange traffic with them exclusively in Time Division Multiplex ("TDM") format. This mode of interconnection is highly inefficient, requiring Cablevision to convert its own IP traffic to and from TDM solely for purposes of interconnection. Cablevision must also invest in facilities to carry this TDM traffic.

The inability to obtain IP interconnection is a significant barrier to the industry-wide transition to IP facilities that AT&T advocates. Large ILECs may have little incentive to upgrade their interconnection facilities to IP, as they derive revenues from transporting TDM traffic and raise their IP-based competitors' costs by requiring them to convert traffic to TDM. CLECs (and smaller ILECs) may be hesitant to invest in IP facilities if they are not going to be able to interconnect with large ILECs in IP. And providers like Cablevision, which have made the considerable investments necessary to transition to IP networks, are unable to fully realize the efficiencies and consumer benefits of those investments if they must downconvert their traffic to TDM. Accordingly, if the Commission is to conduct a proceeding to "facilitate the

'telephone' industry's continued transition" to IP as AT&T requests, AT&T Petition at 1, any such proceeding must ensure the availability of IP interconnection on reasonable terms.

DISCUSSION

A. FCC Oversight of Interconnection Obligations Remains Necessary Irrespective of the Network Technology Used.

Interconnection among networks on just and reasonable terms is essential to ensuring healthy competition. Nothing about the move to IP networks or IP interconnection changes that fact. While AT&T suggests that ILEC IP interconnection obligations are "no longer necessary or appropriate" as a matter of policy, *see* AT&T petition at 22, that is simply untrue. To be sure, competitive providers have made substantial inroads in some local retail markets for voice services, and ILECs no longer enjoy the "monopoly" power over all the retail markets that they previously held, *see* AT&T Petition at 11. But those facts do not justify the deregulation AT&T seeks. Today, as in 1996 when Congress created the ILEC interconnection obligations, ILECs hold disproportionate power in the market for interconnection services. Among other things:

- Interconnection agreements are negotiated at the state or multi-state level. Thus, while competitive providers may have made significant inroads in some local markets, ILECs continue to control larger geographical areas and thus retain dominant positions in interconnection negotiations.

- Through affiliated entities, large ILECs control significant volumes of wireless and international traffic, and they can and do leverage this power in interconnection negotiations.

- Due to both the more recent entry of competitive providers into the market and the fact that is highly inefficient for a multitude of competitive carriers to each interconnect with one another separately, competitive providers frequently exchange traffic indirectly, by means of mutual interconnection with the local ILEC. As a result, ILECs as a practical matter control access not only to their own traffic and that of their affiliates, but also of unaffiliated competitive providers with whom they directly interconnect.

The combination of these factors continues to provide ILECs with meaningful market power which, if unrestrained by government oversight, would allow them to exploit their

dominant position to the disadvantage of competitive providers – the exact reason Congress gave the Commission such oversight responsibility in the first instance. The facts are clear that market forces alone have not been able to overcome ILECs' consistent refusal to interconnect in IP on reasonable terms. Any relaxation of "legacy" ILEC regulations in the requested proceeding that weakens interconnection obligations would therefore risk harming consumers and competition.

B. IP Interconnection Obligations Remain Important Even in Trial Runs.

AT&T suggests that interconnection obligations should not apply in the context of the trial runs it proposes, because, AT&T argues, such trial runs should be allowed to prove that such obligations are unnecessary. *See* AT&T Petition at 22. As discussed above, however, because interconnection agreements are negotiated at levels far larger than individual wire centers, the outcomes of negotiated, unregulated IP interconnection agreements at the wire center level would be of little value in predicting the likely results of interconnection negotiations in the actual marketplace.

Moreover, ILECs would have every motive to manipulate the results of such trial runs to favor their desired policy outcomes. Given ILECs' continued market power, they would be able to simply negotiate deals that arrive at whatever terms they deem most helpful in convincing the Commission that oversight of interconnection agreements is no longer needed when traffic is exchanged in IP.[2] The predictable result of such trial runs is that ILECs would simply decline to

[2] *Cf. In re Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, Second Report and Order, 26 FCC Rcd 5411, 5426, ¶ 27 (2011) ("We are also concerned that the recent successes by some providers in obtaining 3G data roaming agreements or offers may have been the result of large providers seeking to defuse an issue under active Commission consideration and may not accurately reflect the ability of requesting providers to obtain data roaming arrangements in the future if the Commission were to decide not to adopt any data roaming rules.") (footnote omitted).

exploit their market power during the "trial" phase (and enter into a handful of negotiated agreements on terms comparatively reasonable to the interconnecting party), and then turn around and extract monopoly rents as soon as they are released more permanently from their interconnection obligations. Put simply, there is no reason to trust that the trial runs proposed by AT&T would yield anything resembling the actual results of the "market-based, regulation-free" interconnection regime that AT&T ultimately desires. AT&T's August 30, 2012 *Ex Parte,* WC Docket No. 10-90 *et al.*, attachment at 2.

C. IP Interconnection Arrangements Are Subject to the Requirements of Section 251.

There remains the question of what standard should govern AT&T's interconnection arrangements during the trial, and beyond. The answer is contained in existing law, which, as Cablevision has explained, applies regardless of technology or the regulatory classification of retail VoIP traffic.

AT&T's Petition suggests that when an ILEC has transitioned facilities to IP technology – whether within a trial run or otherwise – Section 251 is no longer applicable.[3] This claim misreads the law. Section 251(c)(2) of the Communications Act requires ILECs to provide IP interconnection for exchanging such traffic.[4] The statute is technology neutral; it requires "interconnection with the local exchange carrier's network" without limiting that obligation to the use of any particular technology. Indeed, the Commission has previously held that "the interconnection obligations set forth in section 251(c)(2) apply to packet-switched services as

[3] *See* AT&T Petition at 22; AT&T's August 30, 2012 *Ex Parte*, Docket No. WC 10-90 *et al.*, attachment at 1-2 (requesting that the Commission "maintain the market-based, regulation-free interconnection regime that has applied to IP-based interconnection" and that it "forbear from application of section 251(c)(2) interconnection and other requirements" with respect to IP interconnection).

[4] *See generally* Comments of Cablevision Systems Corp. and Charter Communications, Inc., WC Docket No. 11-119 (Aug. 15, 2011) ("Cablevision/Charter Comments").

well as circuit-switched services."[5] Section 251(c)(2) also requires ILECs to offer interconnection "that is at least equal in quality to that provided by the local exchange carrier to itself or to any subsidiary [or] affiliate," an obligation that obligates ILECs to provide IP interconnection where the ILEC itself uses IP technology in its own network or interconnects in IP with an affiliated IXC or other provider, as many large ILECs clearly do.[6]

Accordingly, in conducting any trial runs like those AT&T seeks, the Commission should make clear that ILECs must provide IP interconnection as required by the statute. Cablevision would prefer to enter mutually beneficial voluntary agreements with ILECs to interconnect in IP, as the statute allows, *see* 47 U.S.C. § 252(a)(1), but in the absence of such agreements, the backstop of the interconnection obligations in the Communications Act remains essential.

CONCLUSION

For the reasons described above, the Commission should grant AT&T's Petition in part and open a proceeding to consider the steps it might take to facilitate the IP transition. However, to ensure that competition remains protected as ILECs transition to new equipment, the Commission should make clear that ILECs must comply with their legal obligation to provide interconnection for voice service in IP, whether in the context of "trial runs" or otherwise.

---

[5] *In re Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Order on Remand, 15 FCC Rcd 385, 395, ¶ 22 (1999), *vacated in part and remanded on other grounds, WorldCom, Inc. v. FCC*, 246 F.3d 690 (D.C. Cir. 2001).

[6] 47 U.S.C. §251(c)(2)(C); *see* Cablevision/Charter Comments at 5-7.

Respectfully Submitted,

/s/ Samuel L. Feder

Samuel L. Feder
Luke C. Platzer
JENNER & BLOCK LLP
1099 New York Ave., NW Suite 900
Washington, D.C. 20001
(202) 639-6000

Howard J. Symons
MINTZ, LEVIN, COHN, FERRIS,
GLOVSKY AND POPEO, P.C.
701 Pennsylvania Ave., NW Suite 900
Washington, D.C. 20004
(202) 434-7300

Catherine Bohigian
Senior Vice President, Federal Affairs
Cablevision Systems Corp.
1099 New York Ave. NW Suite 675
Washington, DC 20001
(202) 393-0343